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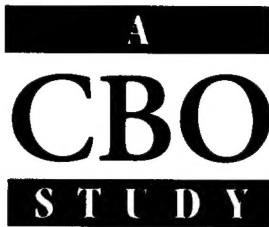# STUDY

DECEMBER 2003

The Long-Term Budget Outlook

A CBO STUDY

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December 2003

The Congress of the United States ■ Congressional Budget Office

Note

Numbers in the text and tables of this report may not add up to totals because of rounding.

Preface

This Congressional Budget Office (CBO) report extends previous long-term analyses by CBO, examining pressures on the federal budget over the coming decades and the kinds of policy choices that lawmakers face as they consider ways to alleviate those pressures. If current policies continue, rapidly rising health care costs and an aging population will sharply increase federal spending for entitlement programs, such as Social Security, Medicare, and Medicaid. This report presents illustrative scenarios for federal spending and revenues through 2050 and describes the implications of those scenarios for the economy. In accordance with CBO's mandate to provide objective and impartial analysis, this document contains no recommendations.

Douglas Holtz-Eakin
Director

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Executive Summary

As health care costs continue to grow faster than the economy and the baby-boom generation nears eligibility for Social Security and Medicare, the United States faces inevitable decisions about the fundamentals of its tax and spending policies. This Congressional Budget Office report looks at a range of possible paths for federal spending and revenues over the next 50 years and combines them into various hypothetical scenarios. Analysis of those scenarios suggests the following conclusions:

■ Driven by rising health care costs and an aging population, spending on entitlement programs—especially Medicare, Medicaid, and Social Security—will claim a sharply increasing share of the nation's economic output over the coming decades.

■ Unless taxation reaches levels that are unprecedented in the United States, current spending policies will probably be financially unsustainable over the next 50 years. An ever-growing burden of federal debt held by the public would have a corrosive and potentially contractionary effect on the economy.

■ As the U.S. tax system is currently configured, revenues will increase as a share of gross domestic product. Under current law, taxpayers will face higher rates, with detrimental consequences for work, saving, and economic growth.

■ Fiscal policy could be financially sustainable if the growth of health care costs slowed significantly from historical rates. But even in those circumstances, tax revenues would probably need to be higher than they have been in the past.

■ If taxation is restricted to the levels that prevailed in the past, the growth of entitlement spending will have to be substantially reduced. Restricting the growth of outlays for defense, education, transportation, and other discretionary programs would not be enough to ensure fiscal sustainability.

■ Likewise, economic growth alone is unlikely to bring the nation's long-term fiscal position into balance. Moreover, issuing ever-larger amounts of debt or dramatically raising tax rates could significantly reduce growth.

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Economic and Fiscal Implications of Federal Budgetary Choices Over the Long Run

Achallenge confronting the United States over the next half-century is how to conduct fiscal policy in the face of the retirement of the baby-boom generation (the large number of people born between 1946 and 1964).[1] Under current policies, the aging of the population is likely to combine with rapidly rising health care costs to create ever-growing resource demands for federal entitlement programs, such as Medicare, Medicaid, and Social Security. This report maps out several illustrative scenarios for federal spending and revenues over the next 50 years, describes their implications for the economy, and frames the key issues involved in choosing among those alternatives.

The scenarios suggest that the nation's broad fiscal stance through 2050 will depend mainly on two factors: the growth rate of health care costs and the willingness of the populace to be taxed. On the spending side of the budget, the growth of costs for the government's major health care programs is the largest source of budgetary uncertainty.[2] The growth rates for health costs used in

these scenarios suggest that total federal spending for Medicare and Medicaid in 2050 could range anywhere from 6.4 percent of gross domestic product (GDP)—a measure of national economic resources—to more than 21 percent. By comparison, such spending equaled 3.9 percent of GDP in 2003.

On the revenue side of the budget, the two long-term paths considered in this report suggest a smaller, though significant, range of outcomes. In those paths (which assume either enactment of legislative changes to keep receipts at their historical average level relative to GDP or continued adherence to current tax law), revenues range from 18.4 percent to 24.7 percent of GDP in 2050, compared with about 16½ percent in 2003.

Projected spending for the Social Security program grows more slowly and is far more predictable. In the absence of legislative changes, it is estimated to increase by two-fifths as a share of GDP by 2030 and to rise slowly thereafter. That growth is smaller than the growth of federal health care programs under even the most optimistic assumptions used in this report.

Other federal spending (such as for national defense, various nondefense discretionary programs, and mandatory programs other than those mentioned above) is a far smaller source of budgetary pressures. Even under a variety of assumptions, the range envisioned for such spending over the long term does not approach the size

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1. For a definition of fiscal policy and other terms used in this report, see the Congressional Budget Office's glossary of budgetary and economic terms, available at www.cbo.gov.

2. The future path of productivity growth and other economic factors are also uncertain and will have budgetary consequences. However, to simplify the presentation, those sources of uncertainty are not analyzed in this report.

of the range projected for Medicare and Medicaid spending.

A useful barometer of fiscal policy is the amount of government debt held by the public as a percentage of GDP. (For a discussion of why such debt is important, *see Box 1-1*.) By that measure, different budgetary assumptions can lead to vastly different outcomes 50 years from now. The alternative spending paths considered in this report diverge primarily after 2015, and some of those paths lead to growth in debt that is not sustainable over the long run.

The path of fiscal policy is not an end in itself. It matters because of its impact on the economy and the population. Minimizing harmful economic effects would require constraining spending for Social Security, Medicare, and other programs, modifying the tax structure, or both. The more lead time the public had to adjust to such changes, the less disruptive the process would be. Thus, it is advantageous for any long-term policy changes to be formulated soon if they are to be in place when they are needed.

To illustrate, the Congressional Budget Office (CBO) projects that under current law, Social Security spending will rise from 4.2 percent of GDP in 2003 to 6.2 percent in 2050, an increase of 47 percent. If growth in initial benefits was reduced by 1 percent per year beginning with the individuals who became eligible for retirement benefits in 2029, costs would still grow to 5.4 percent of GDP—an increase of 29 percent. If the same adjustment was made 10 years earlier (in 2019), benefits would rise by 16 percent, to 4.9 percent of GDP, in 2050. And if the policy was implemented beginning with people who were eligible for retirement in 2009, benefits in 2050 would be 4.4 percent of GDP, which is similar to their current level. The sooner action is taken, the more effective a gradual constraint will be, potentially mitigating the need for a large, abrupt increase in taxes or cut in benefits. Acting earlier would mean that the burden of costs could be spread more evenly over many generations, requiring less of a contribution from younger generations.

This report includes various broad policy options to provide a sense of the impact that such changes might have on the budget outlook. Those policy options cluster around two areas. Because the aging of the population is inevitable, it is important to consider what level and type of benefits the public wants or needs to give the elderly as the ratio of workers to retirees declines and what level of taxation the U.S. public will accept on a sustained basis.[3]

The Outlook for Federal Spending

For much of its history, the United States devoted only a small fraction of its resources to the activities of the federal government. But the second half of the 20th century marked a period of sustained higher levels of federal peacetime spending. For the past 50 years, federal outlays have averaged about 20 percent of GDP—about 2.4 percentage points above the average for the 1950s. In 2003, those outlays totaled $2.2 trillion.

Not only has the level of spending grown, but its composition has changed dramatically. Spending for entitlement programs has increased from less than one-third of total federal spending in 1962 to more than one-half in recent years. Most of that growth has been concentrated in Social Security, Medicare, and Medicaid. Together, those programs now account for about 42 percent of federal outlays, compared with 2 percent in 1950 (before the health programs were created), and 25 percent in 1975.

The retirement of the baby-boom generation portends a significant, long-lasting shift in the age profile of the U.S. population, which will dramatically alter the balance between the working-age and retirement-age components of that population. The share of people age 65 or older is projected to grow from 12 percent in 2000 to 19 percent by 2030, while the working-age population is expected to fall from 59 percent to 56 percent. As a result, the Social Security trustees project that the number of workers per Social Security beneficiary will decline significantly over the next three decades: from about 3.3 now to 2.2 in 2030. Unless immigration or fertility rates

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3. The population's aging could be offset somewhat with a policy that encouraged significantly more immigration of young workers.

Box 1-1.

Why Is Federal Debt Held by the Public Important?

Budget deficits occur whenever the federal government's total yearly spending exceeds its total yearly revenues, causing the government to borrow funds from the public by selling Treasury securities (bonds, notes, and bills). That additional borrowing increases the total government debt held by the public, which reflects the accumulation of annual budget deficits.

The simple fact that federal debt grows over time is not necessarily a problem. If the economy is growing just as fast, the ratio of debt to gross domestic product (GDP)—and the costs of servicing, or paying interest on, that debt—will remain stable. Moreover, debt does not necessarily create problems if it grows faster than GDP for a limited period. But it cannot do so forever; at some point, the economy will be unable to provide enough resources for the government to service the debt.

Long-term projections of federal debt held by the public relative to GDP provide useful measures for assessing the sustainability of fiscal policies. Some policies might involve future spending commitments that would have a significant impact on future budget surpluses or deficits. Other policies might ultimately raise the growth rate of GDP, which would be reflected in the debt-to-GDP ratio. If budget projections are carried out far enough into the future, they can show whether current commitments imply that spending will consistently exceed revenues and produce debt that grows faster than the economy. Projections of debt relative to GDP can thus indicate whether changes in current policies may be necessary at some point in the future.

Federal debt is not a direct measure of the burdens that current policy places on current and future generations. However, to the extent that current generations receive federal benefits that are not fully financed by current revenues, the costs of those benefits must inevitably shift to future generations.

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change substantially, that figure will continue to decrease slowly after 2030. The interaction of that growth in the retired population with the current structure of the program leads CBO to project that the cost of Social Security benefits will rise from 4.2 percent of GDP now to 5.9 percent in 2030.

The growth of future costs for Social Security, however, pales next to the likely increases in costs for the government's major health care programs. Rising health care costs are boosting spending to a greater degree than can be explained by the growth of enrollment in those programs and general inflation alone. Since 1970, those factors as well as policy changes have caused annual costs per Medicare enrollee to rise 3.0 percent faster than per capita GDP, on average—a difference referred to as "excess cost growth" *(see Box 1-2)*. If that growth remained high—for example, 2.5 percent, as some of the scenarios presented in this report assume—the federal government's spending for Medicare and for its share of the joint federal/state Medicaid program would together exceed 21 percent of GDP by 2050, compared with 3.9 percent in 2003.[4] The Medicare trustees assume that excess cost growth will decline to 1 percent above the growth of per capita GDP. However, even at that rate, the federal costs of Medicare and Medicaid would climb to 11.5 percent of GDP in 2050.

Spending for other federal programs could fall as a percentage of GDP in future years, offsetting some of the growth associated with Social Security, Medicare, and Medicaid. However, as currently structured, those three programs are still likely to raise total federal spending relative to GDP in the coming decades.

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4. Projections of future Medicare and Medicaid spending in this report incorporate the effects of the recently enacted Medicare prescription drug benefit.

Box 1-2.

The Growth of Health Care Costs

Total health care spending in the United States has been growing faster than the economy for many years, and it is projected to continue doing so. Between 1960 and 2001, national health expenditures (NHE) increased from 5.1 percent of gross domestic product (GDP) to 14.1 percent—an average annual growth rate that was 2.5 percent higher than that of the economy as a whole. However, the gap between the two growth rates has gradually been decreasing. It slowed particularly during the 1990s, as the figures below indicate:

	Average Annual Difference Between Growth of NHE and Growth of GDP (Percent)
1960-2001	2.5
1970-2001	2.3
1980-2001	2.3
1990-2001	1.5

Growth in medical care spending has outstripped economic growth, regardless of the source of funds. Expenditures from public (government programs such as Medicare and Medicaid) and private sources (private-sector health insurance or out-of-pocket spending) have both grown faster than GDP. That growth is often thought to result from improvements in technology and from health insurance coverage. In the health care field, unlike most sectors of the economy, technological advances generally raise costs rather than lower them because they increase the demand for services. Widely available health insurance coverage—both public and private—means that individual consumers have little incentive to restrict their consumption of services, because the price they face is far lower than the cost of providing the service. In addition, some tax preferences encourage the purchase of insurance, and others lower the effective price of health services.

Medicare

Medicare's costs have been growing faster than both the economy and national health expenditures for de-

cades, though that growth has been slowing over time *(see the table at right)*. Since Medicare's inception in 1967, spending for the program has increased from 0.2 percent of GDP to 2.4 percent in 2001 and from 4.1 percent of NHE to 17.0 percent.

Data on the Medicare program allow for a more precise determination of the sources of growth than can be developed for NHE. Excluding the growth related to demographic changes, costs per enrollee rose 3.0 percent faster than per capita GDP over the 1970-2003 period. That "excess cost growth" reflects the impact of many factors, including changes in policy and in patterns of medical practice. The average rate of excess cost growth is smaller—2.3 percent—if the 1970s are excluded. (That decade saw particularly rapid growth in Medicare because people with disabilities and end-stage renal disease were made eligible for the program.) The average rate is still smaller—1.7 percent—when it includes only 1990 to 2003, because it reflects the impact of the cost containment measures enacted in the Balanced Budget Act of 1997. If excess cost growth continued at any of those rates, however, it would produce a dramatic increase in Medicare spending as a share of both the federal budget and the economy.

Medicaid

Costs for the Medicaid program have also grown faster than the economy since 1975. Compared with the growth of per capita GDP, Medicaid spending per beneficiary has risen 2.7 percent faster over the past few decades. As a result, the federal government's spending for its share of the program climbed from 0.3 percent of GDP in 1970 to 1.5 percent in 2003. Since 1975 (the earliest year for which data are readily available), the number of Medicaid participants has more than doubled, while the cost per beneficiary has shot up more than tenfold.

Medicaid's excess cost growth is attributable to various factors. First, the program has expanded over the years

Box 1-2.

Continued

	Annual Percentage Growth in Federal Outlays	Annual Percentage Growth in Enrollment[a]	Annual Percentage Growth in Federal Outlays per Enrollee	Annual Percentage Growth in Per Capita GDP	Annual Excess Cost Growth[b]
Medicare					
1970-2003	11.6	2.0	9.4	6.3	3.0
1980-2003	9.1	1.6	7.4	5.0	2.3
1990-2003	7.2	1.5	5.6	3.8	1.7
Medicaid					
1975-2003	12.1	3.0	8.8	5.9	2.7
1980-2003	11.2	3.8	7.1	5.0	2.0
1990-2003	11.1	4.7	6.0	3.8	2.2

Source: Congressional Budget Office.

a.   The measure of enrollment used for Medicare reflects the effects on costs of the changing composition of Medicare beneficiaries; the measure of enrollment used for Medicaid does not. The latter measure is based on administrative data from the Centers for Medicare and Medicaid Services. Medicare data are for calendar years; Medicaid data are for fiscal years.

b.   Excess cost growth is one plus the growth rate of outlays per enrollee divided by one plus the growth rate of per capita GDP (for example, 1.094 ÷ 1.063).

(for example, optional services have been added under state plans). Second, as with Medicare and private health spending, technology has boosted Medicaid's costs as health care providers have supplied beneficiaries with more tests and treatments. Third, prescription drugs have been a major factor driving up costs, particularly in recent years. Finally, in addition to services provided directly to Medicaid enrollees, states' efforts to maximize federal reimbursements have boosted federal spending at times.

Policy Implications

Although the rise in health care costs is a serious concern for many policymakers, it largely reflects private choices influenced by many things, including tax preferences, the structure of insurance, and the aging of the population. As income rises, consumers may prefer to allocate a larger share of their resources to health care and a smaller share to other goods and services. At the same time, the presence of health insurance—both public and private—creates incentives that may encourage additional consumption of services. Individuals, health care providers, and insurers are the agents who determine what is consumed.

Policymakers who want to restrain government spending on health care have two broad approaches to achieve that goal. They could try to change the incentives that affect consumers' choices or the availability of services so as to reduce the consumption of health care services, or they could restrain the amounts that the federal government paid for services. (About 45 percent of current health care spending is governmental; 32 percent of the total is federal.) The former approach would be directed at the level of overall spending; the latter approach would affect the share of spending paid by the government, though it might have little impact on the growth of overall health care spending.

How long health care costs can continue to rise at rates significantly greater than the growth of GDP is a matter for speculation. If such rates persist, at some point spending for health care will consume a substantial share of the nation's output. However, there is no evidence to suggest that excess cost growth will disappear rapidly. It is likely to continue, to some degree, for some time to come.

The Outlook for Revenues

Like federal spending, revenues have been significantly higher in the postwar period than in previous eras—fluctuating between 16.1 percent and 20.8 percent of GDP since 1951.[5] And in the same fashion that spending priorities have changed, the composition of revenues over the past half-century has shifted. Social insurance taxes (for Social Security, Medicare, federal civilian retirement, and unemployment insurance) have risen along with the importance of those programs, while corporate income taxes and excise taxes have diminished as shares of total receipts.

This report examines two long-term paths for federal revenues. In the first, revenues level off at 18.4 percent of GDP, the average for the past 30 years.[6] In the second path, revenues are projected under the assumption that current tax law continues (including the scheduled expiration of the recent tax cuts). The latter assumption implies that average tax rates for individuals would rise well above any historical levels as both inflation and the growth of income above and beyond inflation (real growth) caused a large share of taxpayers to become subject to the alternative minimum tax (AMT) or to move into higher tax-rate brackets.

Of course, decisions about taxes and spending interact. Pressures on the spending side of the budget could make it very difficult not to allow taxes to grow beyond their historical share of national income in order to avoid significant increases in federal debt.

Alternative Scenarios for the Budget

To illustrate the possible range of long-term budgetary outcomes, CBO projected federal spending and revenues through 2050 under a variety of assumptions. It combined those projections into six broad scenarios *(see Tables 1-1 and 1-2 and Figure 1-1)*. The scenarios consist of combinations of three different spending paths and two revenue projections, as shown below:

	Spending	**Revenues**
Scenario 1	High	Lower
Scenario 2	Intermediate	Lower
Scenario 3	Low	Lower
Scenario 4	High	Higher
Scenario 5	Intermediate	Higher
Scenario 6	Low	Higher

Each revenue or spending path is a possible representation of current policy or of long-term historical experience. One or more of the combinations are probably unrealistic in that they represent a mismatch between the levels of taxation and spending that would eventually be addressed by policy changes. Nevertheless, the scenarios are designed to capture the broad long-term dimensions of the fiscal choices that the Congress could face in coming years and the budgetary and economic implications of those choices.

Assumptions About Spending and Revenues over the Long Term

The three spending paths combine different assumptions about the future costs of major federal health programs, national defense, and nondefense programs:

- The high path for spending assumes that excess cost growth in Medicare and Medicaid continues at past rates (2.5 percent per year), that defense spending follows the Administration's 2004 Future Years Defense Program (with allowances for cost risks and additional spending to support the global war on terrorism),[7] and that nondefense discretionary

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5. For most of the period, revenues were far from the top of that range. They exceeded 19.5 percent of GDP on only three occasions in the past 50 years: 1969, 1981, and 1998 through 2001. The first instance resulted from a one-year income surcharge of 10 percent; the second was largely attributable to inflation-related bracket creep in the late 1970s and early 1980s; and the third was heavily affected by historically large capital gains realizations.

6. Federal revenues have averaged 19.0 percent of GDP for the past 10 years, 18.4 percent for both the past 20 years and the past 30 years, and 18.3 percent for the past 40 years.

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7. For more details, see Congressional Budget Office, *The Long-Term Implications of Current Defense Plans: Summary Update for Fiscal Year 2004* (July 2003).

Table 1-1.

Alternative Long-Term Paths for Primary Spending

(Percentage of GDP)

	2010	2030	2050[a]
High Spending Path			
Defense	3.7	2.8	2.0
Social Security	4.2	5.9	6.3
Medicare and Medicaid	5.3	11.5	21.3
Other[b]	4.9	4.3	3.4
Total	**18.1**	**24.5**	**32.9**
Intermediate Spending Path			
Defense	3.1	2.0	1.4
Social Security	4.2	5.9	6.2
Medicare and Medicaid	4.8	8.4	11.5
Other[b]	4.9	4.5	4.2
Total	**17.0**	**20.8**	**23.4**
Low Spending Path			
Defense	3.1	2.0	1.4
Social Security	4.2	5.9	6.1
Medicare and Medicaid	4.4	5.7	6.4
Other	4.8	3.5	2.5
Total	**16.5**	**17.1**	**16.6**

Source: Congressional Budget Office.

Note: Primary spending is the sum of spending for defense, Social Security, Medicare and Medicaid, and other spending (except interest).

a. Minor differences in simulated GDP result in small differences among paths in Social Security spending as a share of GDP.

b. Other spending is lower in 2030 and 2050 under the high spending path than under the intermediate path because this category includes premiums paid by Medicare enrollees, which are treated as negative outlays, and those premiums are larger under the high path's assumption of 2.5 percent excess cost growth.

spending and other mandatory spending (except for Social Security) remain at their historical levels as a share of GDP.

■ The intermediate spending trajectory differs from the high path in two ways: the rate of excess cost growth declines to 1.0 percent (as the Medicare trustees assume) and defense spending gradually returns to a historical real level.

■ The low spending path differs from the intermediate path in three ways: no excess cost growth occurs in health care programs, other mandatory spending slowly declines as a percentage of GDP, and nondefense discretionary spending remains at a constant real level (that is, the current level of spending adjusted for inflation).

All of those paths use the same projection of Social Security spending, which is calculated under the assumption that all currently scheduled benefits will be paid.

Table 1-2.

Projected Long-Term Spending Under Various Scenarios

(Percentage of GDP)

	2010	2030	2050
Scenario 1			
Primary spending[a]	18.1	24.5	32.9
Interest spending[b]	2.6	6.4	19.9
Total Spending	**20.7**	**31.0**	**52.9**
Scenario 2			
Primary spending[a]	17.0	20.8	23.4
Interest spending[b]	2.5	3.7	9.4
Total Spending	**19.5**	**24.5**	**32.8**
Scenario 3			
Primary spending[a]	16.5	17.1	16.6
Interest spending[b]	2.4	1.2	0.1
Total Spending	**18.9**	**18.3**	**16.7**
Scenario 4			
Primary spending[a]	18.1	24.5	32.9
Interest spending[b]	2.5	3.4	10.0
Total Spending	**20.6**	**27.9**	**42.9**
Scenario 5			
Primary spending[a]	17.0	20.8	23.4
Interest spending[b]	2.4	0.7	-0.5[c]
Total Spending	**19.4**	**21.4**	**22.9**
Scenario 6			
Primary spending[a]	16.5	17.1	16.6
Interest spending[b]	2.3	-1.8[c]	-9.7[c]
Total Spending	**18.8**	**15.2**	**6.8**

Source: Congressional Budget Office.

Note: Scenarios are described in Table A-1.

a.   Primary spending is taken from Table 1-1.

b.   Interest spending reflects the level of government borrowing, which is determined by assumptions about previous primary spending and taxes.

c.   Includes proceeds earned on the balance of uncommitted funds, which is CBO's term for the surpluses remaining in each year after paying down all publicly held debt available for redemption.

As noted above, the scenarios also incorporate two trajectories for revenues:

■ The lower path assumes that revenues slowly climb from their present level until they reach 18.4 percent of GDP in 2012—the average level of the past 30 years—and then remain at that level through 2050.

■ The higher path approximates an extension of current law governing the individual income tax. In that path, real bracket creep (real income growth pushing taxpayers into higher tax brackets) and the AMT cause total revenues to continually rise until they reach 24.7 percent of GDP in 2050.

More details about the assumptions and projections underlying the scenarios are shown in the appendix.

Implications of the Scenarios

Measured in terms of federal debt, the scenarios that assume that revenues level off at 18.4 percent of GDP (scenarios 1, 2, and 3) are not promising (see Figure 1-2). Only scenario 3, which includes the lowest spending path, is sustainable over the long term, and that path assumes no excess cost growth in health care programs—an unlikely prospect. Under scenarios 1 and 2, federal deficits grow steadily relative to the economy. As a result, debt reaches 126 percent or 69 percent of GDP, respectively, by 2030 and continues to grow steadily thereafter (even without taking into account the harmful effects of long-term deficits on economic growth, which are not included in the scenarios but are discussed later).

If revenues are higher (as they would be under an extension of current law)—growing to almost 25 percent of GDP, as they do in scenarios 4, 5, and 6—the outlook for federal debt is better, but fiscal stability is not assured. The intermediate and low spending paths (scenarios 5 and 6) produce positive fiscal balances in the future, but the high spending path (scenario 4) still yields rapidly rising deficits. Moreover, the high level of taxation implied by those scenarios could have significant negative effects on private saving and work effort and thus on economic growth.

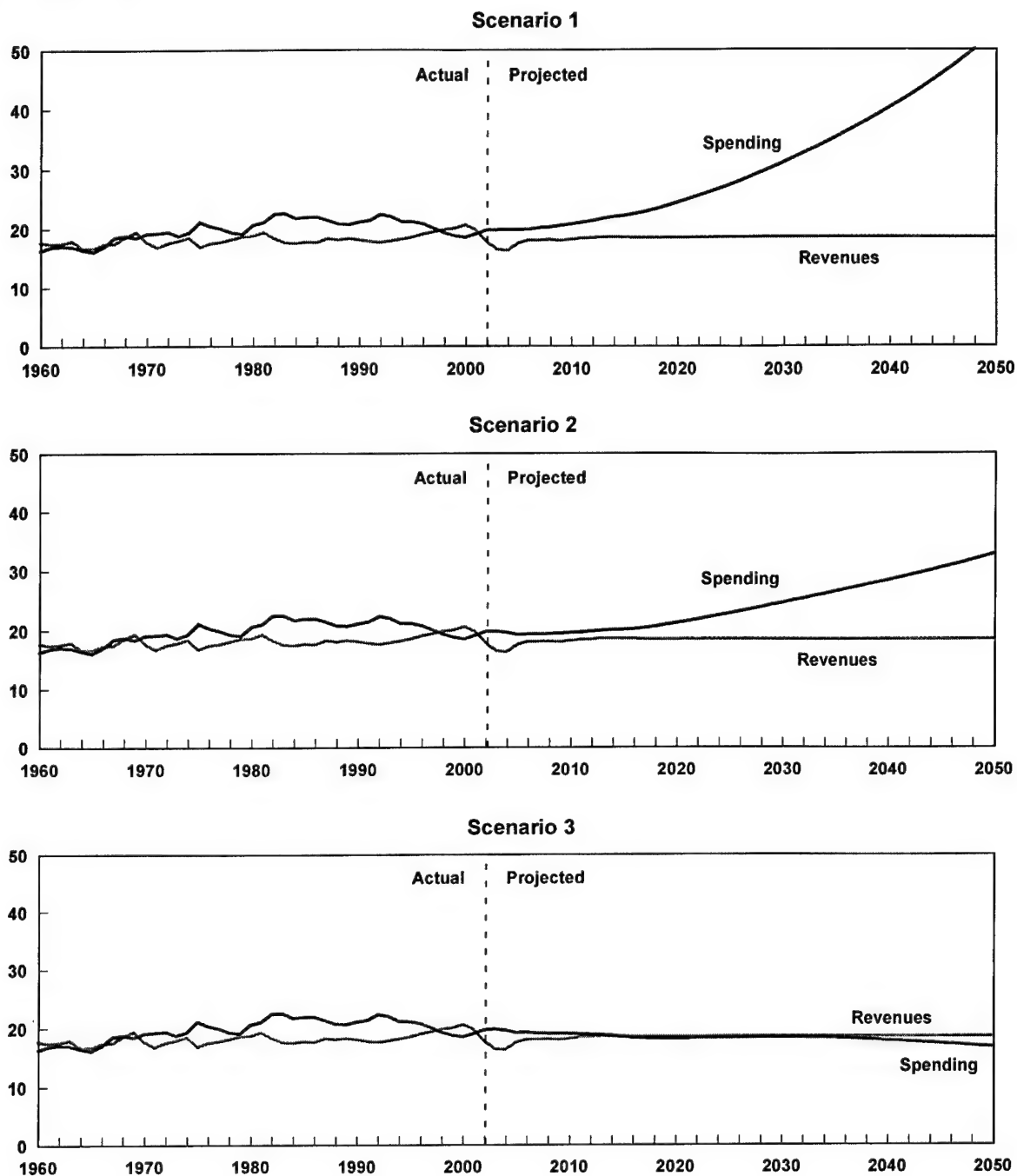The most critical assumption in choosing which spending paths are the most likely is the amount of excess cost growth in the government's major health care programs. Under current policies, that cost growth appears far likelier to average more than 1 percent annually over the next 50 years than to fall below that level. Consequently, the low spending path (scenarios 3 and 6) appears to be a less probable outcome than the other spending paths unless health policy changes significantly. Developing long-term budget strategies on the basis of such highly optimistic scenarios could be risky. However, the other scenarios either require tax revenues that are very high by historical standards or represent fiscal policies that are unsustainable over the long term.

CBO's analysis therefore suggests that substantial reductions in the projected growth of spending or a sizable increase in taxes as a share of the economy—or both—will probably be necessary to provide a significant likelihood of fiscal stability in the coming decades. For example, if spending for programs other than Social Security, Medicare, and Medicaid is tightly constrained to CBO's hypothetical low path (falling from 9.6 percent of GDP in 2004 to 4.0 percent in 2050) and if revenues are kept at their historical average of 18.4 percent of GDP, excess cost growth in Medicare and Medicaid will have to rapidly decline to 0.5 percent or less to prevent an indefinite spiraling of federal debt. Alternatively, if that other spending is constrained to the low path and if excess cost growth is held to an average of 1.0 percent a year, revenues will have to rise to roughly 20 percent of GDP to maintain long-term fiscal stability.

Some commonly discussed proposals to change Social Security, Medicare, and Medicaid would alter the fiscal imbalances present in some of those scenarios. One example is to raise the age at which people become eligible for full Social Security retirement benefits and for Medicare to 70 by 2037 and to continue a slow increase thereafter. That policy (exclusive of its effects on other federal health programs, such as Medicaid and health insurance for federal civilian employees and members of the military) would lower spending by 1.0 percent of GDP by 2030 and 2.0 percent of GDP by 2050. Such a policy change would be comparable in scale to the effects of the recently enacted Medicare drug benefit. The policy would not dramatically change the ultimate path for federal debt under the assumptions of 1.0 percent and 2.5 percent excess cost growth.

Figure 1-1.

Total Federal Spending and Revenues Under Six Long-Term Budget Scenarios

(Percentage of GDP)

Scenario 1

Scenario 2

Scenario 3

(Continued)

Figure 1-1.

Continued

(Percentage of GDP)

Scenario 4

Scenario 5

Scenario 6

Source: Congressional Budget Office.

Note: For information about the assumptions underlying these scenarios, see the text of this chapter and the appendix.

Figure 1-2.

Federal Debt Held by the Public Under CBO's Long-Term Budget Scenarios
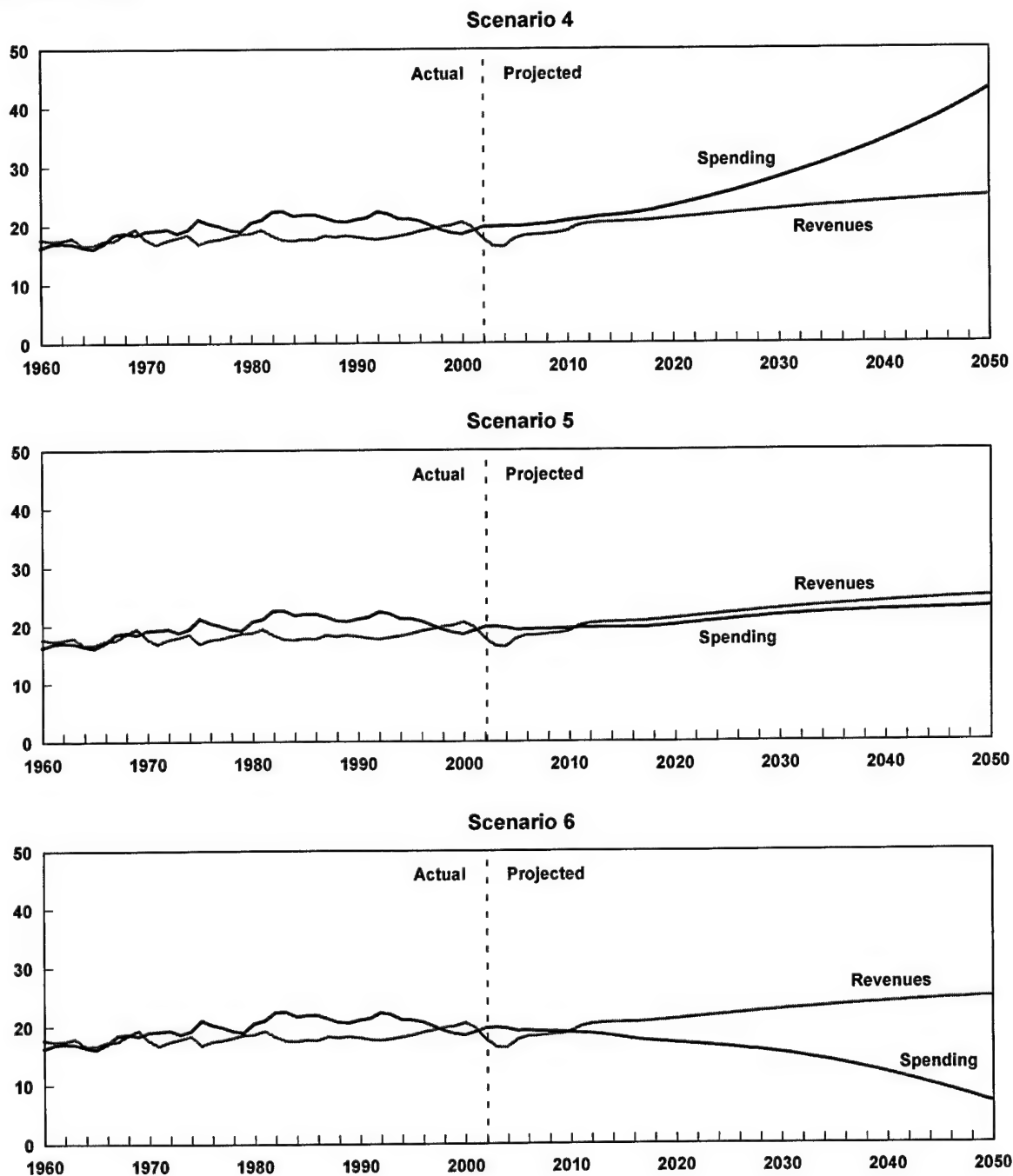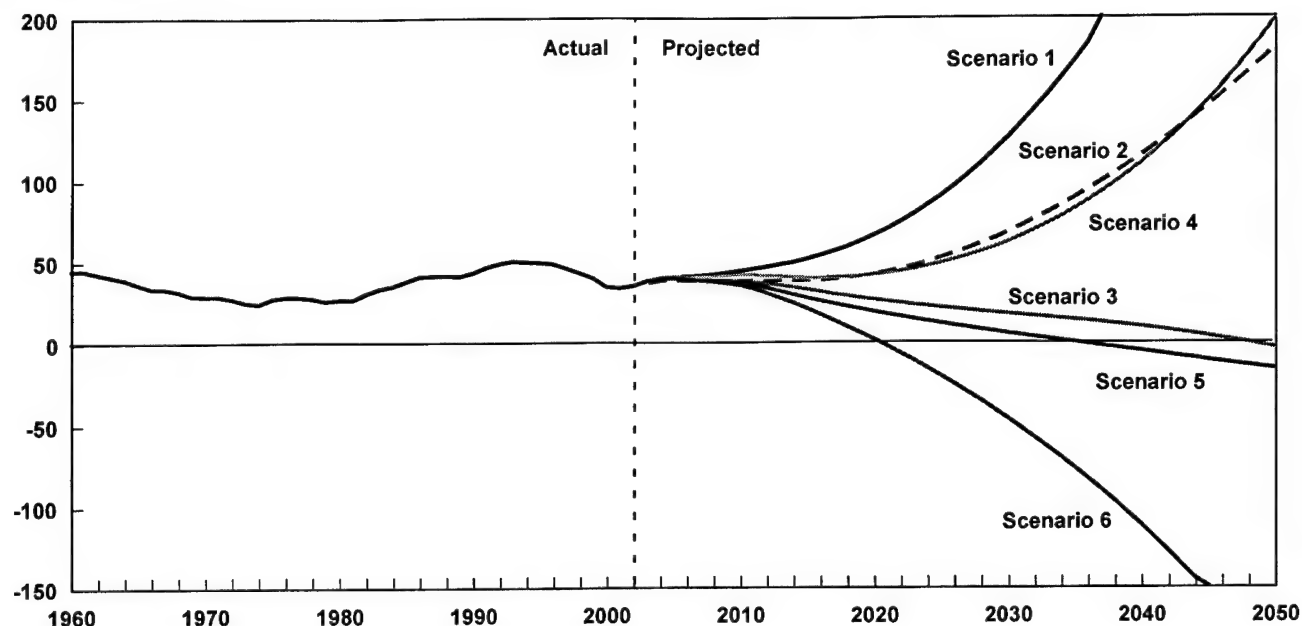
(Percentage of GDP)

Source: Congressional Budget Office.

Note: For information about the assumptions underlying these scenarios, see the text of this chapter and the appendix.

Another policy combination—allowing initial Social Security benefits to grow at the same rate as prices rather than wages and raising Medicare's eligibility age to 67—would restrain spending to a greater degree (by 1.1 percent of GDP by 2030 and 2.4 percent by 2050). However, that restraint would not be enough to offset excess cost growth of 1.0 percent or more. (Those and other options to curb the growth of spending for Social Security, Medicare, and Medicaid are discussed in Chapters 2 and 3.)

Alternatively, tax policies might serve as a mechanism for mitigating the fiscal pressures illustrated in some of the scenarios. One crude way to gauge the effect of using tax policies for that purpose is to assume that revenues jump by 25 percent—to 20.8 percent of GDP, the highest level of the postwar period—in 2005 and remain at that level permanently. If all of that increase was derived from individual income taxes, it would initially require a two-thirds increase in those tax revenues. Compared

with scenarios 1 and 2 (the lower tax/high and intermediate spending scenarios), that change would postpone adverse fiscal outcomes, but eventually, the growth of spending would cause federal debt to resume its rapidly escalating path. Compared with scenario 4 (the higher tax/high spending scenario), that change would produce higher revenues over the next decade or so but lower revenues thereafter, resulting in less debt issuance early in the projection but a much steeper rise toward the end of the 50-year period.

Measures other than the amount of debt held by the public tell a similar story about future fiscal pressures. For more details, *see Box 1-3.*

The Economic Effects of Growing Federal Debt

The budget scenarios described above do not incorporate the economic effects of the various spending and tax

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Box 1-3.
Other Measures of Fiscal Pressures

Many measures besides the ratio of federal debt to gross domestic product also indicate the magnitude of the fiscal burden that the United States could face in the future. Measures used in federal financial reporting (such as liabilities, contingencies, and social insurance commitments), accrual budgets, and forward-looking measures of fiscal imbalances can provide useful gauges of the government's commitments. Those measures all tell a consistent story: if current policies continue, they will impose a large burden on future generations.

Some federal financial reports account for costs on an accrual basis, in which costs are recognized when they are incurred rather than when they are paid. Unpaid costs are reported as liabilities. When the obligation to make a payment is less firm, potential outlays are reported as commitments; when the obligation is less certain, potential costs are reported as contingencies. For 2002, the Treasury reported liabilities of $7.8 trillion, Social Security and Medicare commitments totaling $24.1 trillion over 75 years, and other commitments and contingencies of nearly $800 billion.[1] Thus, the government's total obligations, under current law and accounting standards, are about $33 trillion —nearly three times the size of the economy.

Accrual measures show the government spending more money and running a larger deficit than do the cash

measures reported in the budget. The *Financial Report of the United States Government* shows an accrual deficit of $365 billion for 2002, compared with a unified budget deficit of $158 billion. Most of the difference between the two figures is attributable to interest on accruing liabilities for federal retirement programs. In the *Financial Report*, the costs of Social Security and Medicare are not accrued.

Forward-looking measures of fiscal gaps—the difference between the present value of future revenues and spending under current policies—also suggest that present fiscal policies are unsustainable. Independent analysts calculate the gap at 6.5 percent to 7.5 percent of GDP and attribute it largely to Social Security and Medicare.[2]

Although those other measures are potentially useful in quantifying the overall magnitude of the problem, they are controversial because they depend heavily on assumptions (such as those about future interest rates) that are not widely agreed upon.

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1.   The $24.1 trillion figure for Social Security and Medicare is the 75-year closed-group estimate of commitments (for participants ages 15 and older). See Department of the Treasury, *Financial Report of the United States Government (2002)*, p. 6.

2.   See Jagadeesh Gokhale and Kent Smetters, *Fiscal and Generational Imbalances: New Budget Measures for New Budget Priorities* (Washington, D.C.: AEI Press, 2003); and Alan J. Auerbach, William G. Gale, and Peter R. Orszag, "Reassessing the Fiscal Gap: The Role of Tax-Deferred Saving," *Tax Notes* (July 28, 2003), pp. 567-584. For an analysis of other measures, see General Accounting Office, *Fiscal Exposures: Improving the Budgetary Focus on Long-Term Costs and Uncertainties*, GAO-03-213 (January 2003).

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policies underlying them. The remainder of this chapter analyzes those effects and draws the following conclusions:

■   A budget policy that resulted in rising federal debt could seriously harm the economy. Growing debt would most likely crowd out private capital formation, slow the growth of the econ-

omy, and in the extreme, cause a sustained economic contraction. Moreover, such a policy would probably increase the United States' indebtedness to other nations, implying that more of the economy's output would have to be used to service (pay interest on) that debt and less would be available for U.S. residents.

■ In the scenarios that include high levels of government debt, the nation is unlikely to be able to grow its way out of such long-term budgetary problems.

■ Decisions about how to resolve the nation's long-term budgetary challenges will have economic implications. For example, sharply raising marginal tax rates could have a detrimental effect on incentives for people to work and save—and thus on the size of the economy—whereas reducing the growth of spending could lessen those negative effects.[8]

■ Impacts on the economy are not the only criteria for evaluating government policies. Considerations such as fairness and well-being are also relevant. Evaluating those other effects, however, is beyond the scope of this report.

■ If changes are made to entitlement programs for the elderly or to the tax structure, announcing those changes far in advance will give people time to adjust their plans for work and saving—and thus minimize the overall cost of the changes.

How Would Rising Debt Affect the Economy?

Some of the scenarios described above would push federal debt held by the public to unsustainable levels. For example, if revenues averaged 18.4 percent of GDP and the growth of excess health care costs per enrollee declined to 1 percent in the long run (scenario 2), the annual budget deficit would climb from 3 percent of GDP in 2003 to 14 percent by 2050, CBO projects. In that scenario, persistent and rising deficits eventually push the total amount of federal debt to historic levels: from 38 percent of GDP in 2003 to about 185 percent in 2050 and rapidly rising levels thereafter. The outcomes in scenarios 1 and 4 would be even more dramatic.

In scenarios 1, 2, and 4, the growth of debt would accelerate as the government attempted to finance its interest payments by issuing more debt—leading to a vicious

circle in which ever-larger amounts of debt were issued to pay ever-higher interest charges. Eventually, the costs of servicing the debt would outstrip the government's ability to pay them, thus becoming unsustainable.

However, as noted in Box 1-1, budget deficits are not always harmful. When the economy is in a recession, deficits can stimulate demand for goods and services and bring resources back to full employment. They can also provide critical financing during wartime.[9] But the deficits in CBO's long-term scenarios occur not because the government is trying to pull the economy out of a recession, fight a war, or allocate resources to investment, but because it is spending more and more on entitlement programs for the elderly and on interest payments on the accumulated debt.

Impact on Capital, Productivity, and Growth. Sustained and rising budget deficits would affect the economy by absorbing funds from the nation's pool of saving and reducing investment in both the domestic capital stock and foreign assets.[10] Investment in business structures, equipment, research and development, worker training, and education would be lower than it would be in the absence of such large levels of federal borrowing. As a result, the growth of workers' productivity would gradually slow, real wages would begin to stagnate, and economic growth would tend to taper off. If that situation continued long enough, rising deficits could actually

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8. Marginal tax rates are the rates that people pay on an additional dollar of income.

9. In principle, deficits could also be used to finance productive long-term government investments, although it is difficult to define and identify what is a productive investment. A review of the economics literature suggests that many federal investment projects yield small, or even negative, net benefits for the economy. See Congressional Budget Office, *The Economic Effects of Federal Spending on Infrastructure and Other Investments* (June 1998).

10. That situation would arise unless the private sector responded by increasing its saving by the amount of the deficit; see Robert Barro, "Are Government Bonds Net Wealth?" *Journal of Political Economy*, vol 82, no. 6 (November/December 1974), pp. 1095-1117. Such a response, however, would be at odds with empirical evidence; see Paul Evans, "Consumers Are Not Ricardian: Evidence from Nineteen Countries," *Economic Inquiry*, vol. 31, no. 4 (October 1993), pp. 534-548; and T.D. Stanley, "New Wine in Old Bottles: A Meta-Analysis of Ricardian Equivalence," *Southern Economic Journal*, vol. 64, no. 3 (January 1998), pp. 713-727.

lead to a sustained contraction of the economy. Although some portion of the deficit would be financed by foreign investors, lessening the degree to which the deficit crowded out investment in the domestic capital stock, borrowing from abroad would not be free. Over time, foreign investors would claim larger shares of the nation's output. In the end, fewer resources would be available for domestic consumption.

Taken to the extreme, such a path could result in an economic crisis. Foreign investors could stop investing in U.S. securities, the exchange value of the dollar could plunge, interest rates could climb, consumer prices could shoot up, or the economy could contract sharply. Amid the anticipation of declining profits and rising inflation and interest rates, stock markets could collapse and consumers might suddenly reduce their consumption. Moreover, economic problems in the United States could spill over to the rest of the world and seriously weaken the economies of U.S. trading partners.

A policy of higher inflation could reduce the real value of the government's debt, but inflation is not a feasible long-term strategy for dealing with persistent budget deficits. To be sure, unexpected increases in inflation would enable the government to repay its debts in cheaper dollars and make borrowers better off at the expense of creditors. But financial markets would not be fooled forever; investors would eventually demand higher interest rates. If the government continued to print money to finance the deficit, the situation would eventually lead to hyperinflation (as happened in Germany in the 1920s, Hungary in the 1940s, Argentina in the 1980s, and Yugoslavia in the 1990s). Moreover, interest rates could remain high for some time even after inflation was brought back under control. Once a government has lost its credibility in financial markets, regaining it can be difficult. In the end, inflationary financing cannot address the fundamental problem that spending exceeds revenues.

Faster economic growth could improve the budget outlook, but such growth on its own is unlikely to solve the budgetary problems faced in the high-debt scenarios. Although faster growth would push up revenues in the

near term, it would also raise spending later on.[11] Social Security benefits, for example, depend on each worker's wage history, so gains in real wages would automatically translate into higher costs in the long term. Moreover, if the past is any guide, federal health care spending would also rise with an expanding economy. Thus, faster economic growth would provide only temporary relief in the high-debt scenarios.
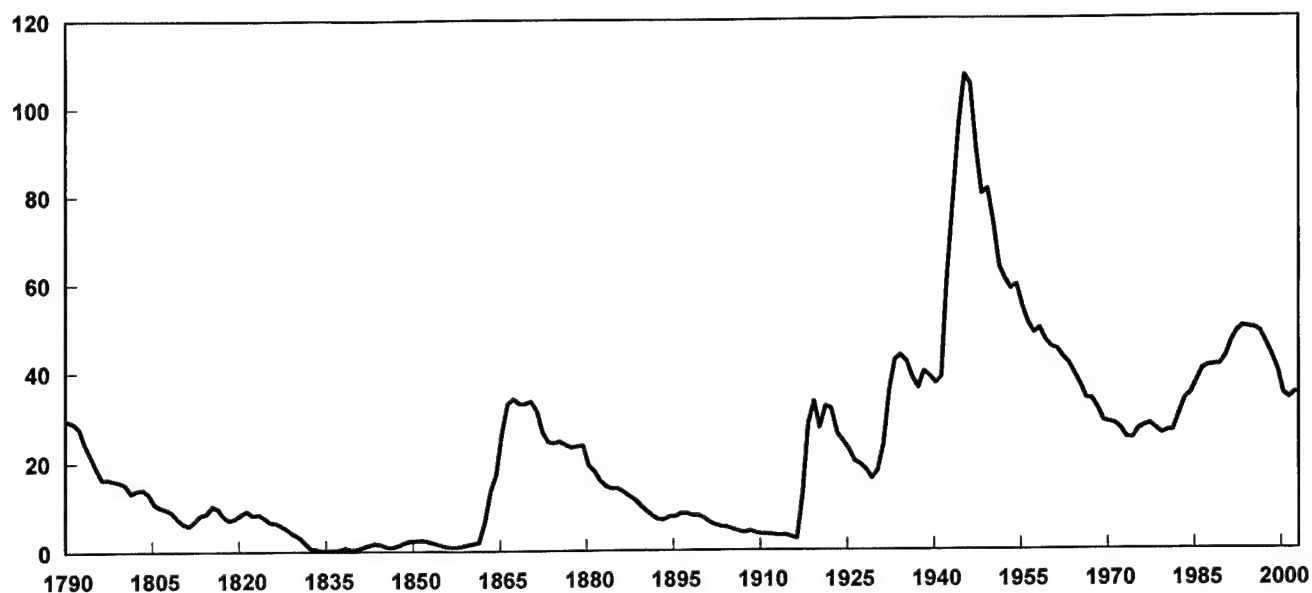
Is There a Safe Level of Debt? Budgetary paths are economically unsustainable not when the debt hits a critical level but when the government adopts policies that cannot be carried out indefinitely. Because it is future policies that matter, no bright line separates safe from unsafe levels of debt. However, the projected debt in some of those scenarios is large by any standard. Since the founding of the United States, the annual budget deficit has exceeded 10 percent of GDP in only a few periods—and those were during major wars. Moreover, total federal debt has exceeded 100 percent of GDP just once—for a brief period during World War II (see Figure 1-3). That budgetary situation was temporary, however; as soon as the war was over, federal debt began to decline as a share of the economy. In fact, until the 1980s, the ratio of debt to GDP had never risen significantly during a period of peace and prosperity.

Other nations have accumulated high levels of debt, but that debt carries economic and budgetary burdens. For example, during the 1990s, net public debt averaged about 103 percent of GDP in Italy, 118 percent in Belgium, and 101 percent in Greece.[12] Unlike the projections of debt in CBO's scenarios, those countries' experience involved debts that increased and then remained

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11. Several analysts have examined the effects of alternative economic assumptions on the long-term outlook. See Congressional Budget Office, *Uncertainty in Social Security's Long-Term Finances: A Stochastic Analysis* (December 2001); and Social Security Administration, *The 2003 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (March 17, 2003).

12. Organisation for Economic Co-operation and Development, *Economic Outlook* (Paris: OECD, 2003).

Figure 1-3.

Federal Debt as a Percentage of GDP, 1790 to 2002

Sources: Congressional Budget Office using data on federal debt from the Department of the Treasury and the Board of Governors of the Federal Reserve System. GDP estimates come from the Bureau of the Census; Thomas Berry, *Revised Annual Estimates of American Gross National Product* (Richmond, Va.: Bostwick Press, 1978); Robert E. Gallman, "Economic Growth and Structural Change in the Long Nineteenth Century," in Gallman and Stanley L. Engerman, eds., *The Cambridge Economic History of the United States*, vol. 2, *The Long Nineteenth Century* (Cambridge, England: Cambridge University Press, 2000), pp. 1-55; Nathan S. Balke and Robert J. Gordon, "The Estimation of Prewar Gross National Product: Methodology and New Evidence," *Journal of Political Economy*, vol. 97, no. 1 (February 1989), pp. 38-92; and the Department of Commerce, Bureau of Economic Analysis.

fairly stable relative to GDP, not debts that rose ever faster. Even so, to keep their debts under control, all of those governments had to run large primary surpluses (revenues minus noninterest spending) simply to cover their interest payments.

How Would Alternative Budget Strategies Affect the Economy?

The goods and services that baby boomers will consume in their retirement will be produced largely by the economy when they are retired. Thus, the bigger the economy, the easier it will be for the nation to adjust to an aging population.

Different budgetary strategies—such as lowering benefit payments to the elderly or raising taxes—would affect the economy in different ways. For example, slowing the growth of spending by reducing retirees' benefits could

be one way to lessen the future pressures on the budget and expand the economy. Such a policy would probably encourage saving and increase the capital stock, although the size of the effect—and its path over time—is very uncertain. The results would depend on the extent to which workers anticipated and responded to the cuts in their future benefits. Forward-looking workers would probably reduce their current consumption and increase their saving in the expectation of receiving smaller benefits. However, some people might not be so prudent. They would also reduce their consumption, but that would probably occur in retirement, when they received smaller benefit checks.

Cutting future payments to the elderly might also affect the labor supply. That effect is also uncertain and would depend on the precise nature of the cuts. Some reductions in benefits could encourage people to work more

to make up for the lost income; others might discourage work by reducing the marginal return (the return from an additional hour worked).

Policymakers could also raise taxes to alleviate future pressures on the budget, although the economic effects of that policy would depend on the type of tax that was raised. Other things being equal, policies that raise marginal tax rates tend to have more negative effects on GDP than do policies—such as changes in personal exemptions, child credits, or standard deductions—that do not affect marginal tax rates.[13] Higher marginal tax rates also increase inefficiencies in the economy, which grow disproportionately with the tax rates.

Illustrative Simulations of Alternative Budgetary Strategies. CBO used a model of economic growth to illuminate the character of the economic effects of those alternative budgetary strategies. The model was selected because it distinguishes between people born in different years, making it well-suited to an analysis of the impacts of programs like Social Security and Medicare.[14] The model incorporates the assumption that people are forward-looking and will adjust their behavior in anticipation of future changes in tax rates and benefits.

CBO used the model to compare the effects of two alternative budget policies. The first policy roughly matches the higher-revenue (current-law) scenario presented earlier; it permits income taxes to rise and uses the additional revenue to finance higher spending on entitlement programs for the elderly. Under that policy, marginal tax rates rise gradually because real income growth pushes people into higher tax brackets and makes them subject to the alternative minimum tax. The effective marginal tax on labor income increases from 32 percent in 2006 to 40 percent in 2050, and the effective mar-

ginal rate on capital income increases from 17 percent in 2006 to about 19 percent in 2050. As a result, total federal revenues increase by 6.5 percent of GDP in 2050 (before considering economic feedbacks). Because that simulation incorporates the assumption that additional revenues are spent on retirement-related entitlement programs, spending also increases by about 6.5 percent of GDP in 2050.[15] By design, the policy is meant to be sustainable over the long term.

The alternative policy is also sustainable but focuses on a lower-tax, lower-spending strategy. Specifically, the policy keeps the revenue share of GDP constant and eliminates the rise in spending on the entitlement programs for the elderly that occurs under the other policy.

Both policies alter the flow of savings to domestic capital markets, international capital markets, or both. To illustrate the importance of international capital markets, the model uses two different assumptions—polar opposites—about the degree of openness of the economy. The first posits a closed economy, in which domestic markets are insulated from the rest of the world and thus interest rates and wage rates are determined solely by domestic forces. The second alternative is a small open economy; in that case, interest rates and wages are fixed by world markets. In actuality, the U.S. economy is somewhere between those two extremes.

The simulations suggest that policies with higher marginal tax rates and higher spending on entitlement programs tend to produce weaker economic growth compared with policies that comprise lower marginal rates and lower spending. In the closed-economy version of the model, real GDP under the higher-tax, higher-spending policy is about 6 percent lower in 2050 than it is under the lower-tax, lower-spending policy.[16] That result stems from the fact that higher marginal tax rates on labor discourage work and higher entitlement spend-

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13. See Congressional Budget Office, *Labor Supply and Taxes* (January 1996).

14. For more information about the model, see Congressional Budget Office, *How CBO Analyzed the Macroeconomic Effects of the President's Budget* (July 2003); and Shinichi Nishiyama, "Analyzing Tax Policy Changes Using a Stochastic OLG Model with Heterogeneous Households," *CBO Technical Paper* (Forthcoming).

15. The growth of overall spending under this policy is similar to that in the intermediate scenario described earlier, although the mix of spending is different.

16. If the level of real GDP is 6 percent lower in 2050, the average annual growth rate of real GDP between 2004 and 2050 is 0.14 percentage points less than it would otherwise be.

ing reduces incentives for people to save for retirement. Under the higher-tax, higher-spending policy, the labor supply is down by about 3 percent and the capital stock is smaller by about 14 percent in 2050. That pattern of results is generally consistent with those of other models.

The open-economy version of the model produces smaller effects on real GDP. In the simulation, real GDP is only 2 percent lower in 2050 under the higher-tax, higher-spending policy than under the lower-tax, lower-spending policy. That result arises because capital flows from abroad mute the impact of lower domestic saving on the capital stock. As a result, the capital stock declines by only 2 percent. However, because a larger fraction of GDP must be used to service the U.S. debts to foreigners, real GNP (which measures income after deducting net payments to foreigners) falls by 8 percent in 2050. Although those economic effects are significant, they are small relative to the growth of real GDP over the next 50 years.

The Costs of Delay. Because interest costs rise as debt grows, the longer that lawmakers delay acting to counter an unsustainable budgetary situation, the larger the spending cuts or tax increases will eventually have to be. Delay also raises another problem: as interest costs mount, the government's flexibility to deal with unexpected developments, such as a war or a recession, diminishes.

Delay can also impose costs on households. The longer that action is put off, the greater the chance that policy changes will occur suddenly, making it difficult for households to react. Thus, announcing changes in popular entitlement programs or in the tax structure well before they take place can give people time to adjust their plans for saving and retirement. Those adjustments can significantly lessen the costs of making policy changes and reduce the impact on retirees' and taxpayers' standards of living.

The Long-Term Outlook
for Social Security

Social Security is by far the federal government's largest income-redistribution program. The Old-Age and Survivors Insurance part of the program pays benefits to retired workers and their dependents and survivors. The Disability Insurance (DI) part makes payments to disabled workers who are younger than the normal retirement age and to their dependents. In all, about 46 million people now receive Social Security benefits.[1]

Driven largely by repeated expansions of the program during its first 40 years, spending for Social Security benefits steadily increased relative to the size of the economy, reaching 4 percent of gross domestic product in 1975 *(see Figure 2-1)*. Since then, that spending has generally fluctuated between 4.0 and 4.5 percent of GDP. In 2003, it accounted for an estimated 4.2 percent of GDP.

The Outlook for Social Security Spending

The cost of the Social Security program will rise significantly in coming decades—a change that has long

been foreseen. Average benefits typically grow when the economy does (because the earnings on which those benefits are based increase). However, in the future, the total amount of Social Security benefits paid will grow faster than the economy because of changes in demographic structure. As the baby-boom generation reaches retirement age and as decreasing mortality leads to longer lives and longer retirements, a larger share of the population will draw Social Security benefits.[2] Moreover, the number of people age 65 or older will double during the next 30 years, while the number of adults under age 65 will grow by less than 15 percent —meaning that in three decades, the older population will be more than one-third the size of the younger group, compared with one-fifth today *(see Figure 2-2)*. Consequently, the Congressional Budget Office estimates that unless changes are made to Social Security, spending for the program will rise to 4.9 percent of GDP in 2020, 5.9 percent in 2030, and 6.2 percent in 2050.

Discussions of Social Security frequently address the status of the program's trust funds. However, this chapter considers total Social Security outlays, which represent

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1. For a fuller discussion of how the Social Security program works and how changes to it might affect the nation's ability to deal with impending demographic shifts, see Congressional Budget Office, *Social Security: A Primer* (September 2001).

2. For more information about the retirement prospects of the baby-boom generation, see Congressional Budget Office, *Baby Boomers' Retirement Prospects: An Overview* (November 2003).

Figure 2-1.

Spending for Social Security

(Percentage of GDP)

Source: Congressional Budget Office.

a claim on government resources, whether from trust funds or other sources. (Revenues, the means of providing such resources, are examined in Chapter 5.)

How Social Security Functions

In general, workers are eligible for retirement benefits if they are age 62 or older and have paid sufficient Social Security taxes for at least 10 years. Workers whose employment has been limited because of a physical or mental disability can become eligible for DI benefits at an earlier age with a shorter employment history.

When retired or disabled workers first claim Social Security benefits, they receive payments based on their average level of earnings over their working lifetime; those payments are subsequently adjusted to reflect annual changes in the cost of living. The formula used to translate average earnings into benefits is progressive—in other words, it replaces a larger share of preretirement

earnings for people with lower average earnings than it does for people with higher earnings. Both the earnings history and the specific dollar amounts included in the formula are indexed for changes in average annual earnings for the labor force as a whole. That indexation causes initial benefits for future recipients to grow in real terms (beyond the level of inflation).[3]

For retirement benefits, a final adjustment is made based on the age at which the recipient chooses to start claiming benefits—the longer a person waits (up to age 70), the higher the benefit level. That final adjustment is intended to be "actuarially fair," so that an individual's

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3. For a more detailed description of that formula, see Congressional Budget Office, *Social Security: A Primer*, Chapter 2.

Figure 2-2.

The Population Age 65 or Older as a Percentage of the Population Ages 20 to 64

(Percent)

Source: Congressional Budget Office.

total lifetime benefits will be equally valuable regardless of when he or she begins collecting them.[4]

For workers born before 1938, the age of eligibility for full retirement benefits—referred to as Social Security's "normal retirement age"—was 65. Under current law, that age is gradually increasing and will be 67 for people born in 1960 or later.[5] Workers will still be able to choose to begin receiving reduced benefits as early as age 62.

People who retired at age 65 in 2003 having had average earnings throughout their career were eligible for an

annual benefit of about $13,800. That amount replaced roughly 40 percent of their previous annual earnings. Under current law, the replacement rate will be smaller for workers with average earnings who retire at age 65 in the future, mainly on account of the scheduled increase in the normal retirement age. Nevertheless, because initial benefits are indexed to average wages, which grow over time, the real value of those benefits will continue to rise.

Options for Slowing the Growth of Social Security Spending

Three broad approaches for slowing the rise in Social Security benefits have received considerable attention. First, policymakers could reduce the size of the initial payments that new Social Security beneficiaries are scheduled to receive. Second, they could increase the age at which workers become eligible for full retirement benefits. Third, policymakers could reduce the annual cost-of-living adjustments that beneficiaries receive once

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4.   The adjustment is not yet completely actuarially fair, but it will be for beneficiaries who turn 65 in 2008 or later.

5.   Specifically, the normal retirement age will rise by two months per birth year for people born from 1939 through 1943 and again by two months per year for people born from 1955 through 1960.

they become eligible for benefits. Because more than 99 percent of Social Security outlays are benefit payments, however, any attempt to reduce spending must center on their growth.

Reform proposals that incorporate individual accounts are not addressed in this report. Because those packages encompass a broad range of proposed changes and vary in scope (accounts of different sizes, voluntary versus mandatory participation, and direct or indirect offsets to Social Security benefits), their potential budgetary effects vary widely and no simple generic option can adequately characterize them.[6]

If policymakers decide to slow the growth of Social Security benefits, considerations of both fairness and economic efficiency point toward enacting new legislation long before the changes take effect. People often consider the size of their expected Social Security benefits when they decide how much to save and how long to work. Altering that size gradually would give people more time to plan for and adjust to the changes.

The rest of this chapter looks at specific options that represent ways to implement the three broad approaches described above. The estimates of savings included with the options are intended to indicate the relative magnitudes of alternative changes. Specific estimates of savings would depend on the details of individual proposals.

Constrain the Increase in Initial Benefits

The most straightforward way to reduce the growth of Social Security spending would be to slow the rate at which initial benefits rise from one cohort of recipients to the next. Each new group of eligible beneficiaries would then receive lower benefits than scheduled under current law. However, that approach would not alter the benefits of people who were already on the rolls before the change took effect.

One method of doing that, which has received considerable attention, would be to change the way initial benefits were calculated so that they grew with prices instead of wages. The benefits awarded to each succeeding cohort would still rise in nominal terms, but only by enough to keep up with inflation. Whether that option reduced benefits would depend on how benefits were measured:[7]

- In real terms, annual benefits would be unchanged. Future retirees would have the same purchasing power as retirees today.

- Measured over a lifetime, total benefits would still increase because longevity is expected to keep growing.

- Compared with wages, annual benefits would fall (in other words, the replacement rate would decline).

- Compared with the amounts that future beneficiaries are scheduled to receive under current law, benefits would fall.

The decline relative to currently scheduled benefits would increase for each future cohort of retirees. Under the specific option modeled here, initial benefits would grow with prices for people turning 62 in 2011 or later. If real wages grew at an average rate of 1.3 percent per year, as this option assumes, the projected impact on future benefits would be large. For example, workers who became eligible for benefits in 2030 would receive 23 percent less under this option than they would under the current rules. Workers who became eligible in 2050 would receive about 41 percent less.

Adopting this option would reduce outlays for Social Security in 2050 by about 34 percent from the level projected under current law. As a result, those outlays would equal 4.1 percent of GDP instead of 6.2 percent *(see Figure 2-3)*. Thereafter, Social Security spending would continue to decline as a share of GDP.
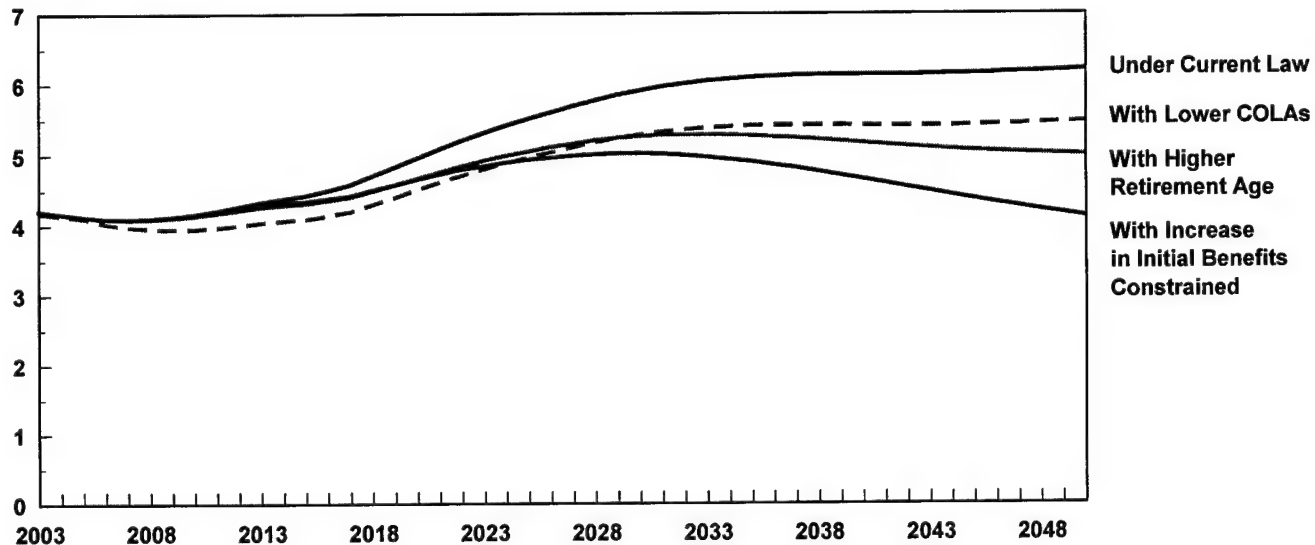
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6. See Congressional Budget Office, *Social Security: A Primer*, for a discussion of issues relating to proposals for individual accounts.

7. See Congressional Budget Office, *Measuring Changes to Social Security Benefits*, Long-Range Fiscal Policy Brief No. 11 (December 1, 2003).

Figure 2-3.

Federal Spending Under Illustrative Options for Slowing the Growth of Social Security

(Percentage of GDP)

Source: Congressional Budget Office.

Notes: See the text of this chapter for descriptions of the various options.

COLAs = cost-of-living adjustments.

For simplicity, this illustrative option would result in the same percentage change in benefit levels for all beneficiaries in a cohort. However, a comprehensive policy proposal could include other adjustments that would protect lower-income beneficiaries from the proposed changes—for example, by setting a minimum benefit level or by making the existing benefit formula more progressive.

Raise the Retirement Age

Since benefit levels are designed to be actuarially fair regardless of the age at which someone begins receiving benefits, changing the early-retirement age from 62 would have relatively little effect on total Social Security spending, although it might induce people to work longer and therefore pay more payroll taxes. In contrast, raising the normal retirement age would result in lower benefits for all retirees, no matter when they chose to start receiving them, because the number of years over which workers earned benefits would fall. For retirees,

increasing the normal retirement age would be equivalent to reducing annual benefit levels.

Some Members of Congress and others have recommended accelerating the current shift to a normal retirement age of 67 and raising that age further thereafter. Proponents of such a change point out that current 65-year-olds are projected to live much longer than was the case in the early days of the Social Security system and that life expectancy will almost certainly continue to grow.

Debate about the level of Social Security benefits tends to focus on how much people will receive each month rather than on how much they will receive over their lifetime. But because of increasing longevity, a commitment to give retired workers a certain amount of monthly benefits at age 62 in, say, 2030 is likely to be more expensive over the recipients' lifetime than that same commitment made to retirees today. The swell of

Table 2-1.

The Increase in the Normal Retirement Age Under Current Law and an Illustrative Option

Year of Birth	Year of Turning Age 65	Social Security's Normal Retirement Age	Percentage Reduction in Social Security Benefits for Early Retirement	
			Retirement at Age 62	Retirement at Age 65
Under Current Law				
1943	2008	66	25	7
1960	2025	67	30	13
Under Illustrative Option[a]				
1943	2008	66	25	7
1949	2014	67	30	13
1955	2020	68	35	20
1961	2026	69	40	25
1967	2032	70	45	30
1991	2056	71	50	35

Source: Congressional Budget Office based on information from the Social Security Administration's Office of the Actuary.

a. Under this option, the normal retirement age would reach 67 for workers born in 1949. The retirement age would increase by two months for each year thereafter until it reached 70 for people born in 1967, and then it would increase by one month for every two years.

the baby-boom generation will cause most of the growth in the number of Social Security beneficiaries over the next 30 years. But in the longer term, the growth in beneficiaries—and in costs—will be driven by increasing longevity. Linking the normal retirement age to future increases in life expectancy is one way of dealing with that source of cost growth.

The specific option considered here *(which is illustrated in Table 2-1)* would speed up the transition to a normal retirement age of 67 and then raise that age further to keep pace with assumed future increases in life expectancy. For workers born in 1949, the normal retirement age would be 67. Thereafter, the retirement age would increase by two months per year until it reached 70 for people born in 1967. After that, it would rise by one month every other year. As under current law, workers would still be able to receive reduced benefits starting at age 62, but the amounts of the reductions would be larger.

This option would produce substantial savings in relation to projected spending levels under current law: by 2050, the savings would be about 19 percent. Outlays would be 5.0 percent of GDP instead of 6.2 percent in that year and thereafter would continue to decline slightly as a share of GDP.

This specific option would not affect the scheduled benefits of workers who qualified for Disability Insurance. Thus, as DI benefits became relatively more attractive, older workers nearing retirement would be more likely to apply for them. To avoid strengthening that incentive, policymakers could make similar adjustments to scheduled DI benefits—for example, by setting the benefits for workers who qualified for DI at the level those workers would have received if they had retired at a specific age, such as 65 or 67. (Under current law, their benefits equal the amount they would have received when retiring at the normal retirement age.)

Current projections of Social Security outlays are sensitive to projections of life expectancy. If future beneficiaries live longer than expected, government outlays will be higher than anticipated. Under a system in which the normal retirement age varied with life expectancy, beneficiaries would either have to work longer and start receiving benefits later or have to accept lower annual payments. In either case, their total lifetime benefits would no longer grow as a result of increases in longevity.

Reduce Cost-of-Living Adjustments

Each year, the Social Security Administration makes a cost-of-living adjustment (COLA) to monthly benefits, raising them by the percentage increase in the consumer price index (CPI). The CPI is not intended to be a "true" cost-of-living index, and many economists believe that it grows faster than such an index would. However, they disagree about the extent to which the CPI overstates inflation. In 1996, the Advisory Commission to Study the Consumer Price Index (known as the Boskin Commission) concluded that the CPI probably overstated the change in the cost of living by between 0.8 percentage points and 1.6 percentage points per year.[8] Since the commission's report was issued, the Bureau of Labor Statistics has made several modifications to the way in which it calculates the CPI, thereby eliminating most of the identified problems with the index. But even if all of the technical issues with the CPI have been corrected, the separate issue remains of whether the index properly measures the cost of living for Social Security beneficiaries. Their cost of living may grow faster than that of other consumers because of their different purchasing patterns.

Some policymakers suggest that Social Security law be changed to provide for a lower COLA—one equal to the annual increase in the CPI minus a specified number of percentage points. If in fact the CPI still overstates increases in the cost of living for Social Security recipients, policymakers can reduce the adjustment by an appropriate amount without making benefits any lower in real

terms than they were when the recipients became eligible for them.

If the CPI accurately measures increases in the cost of living, a reduction in the COLA will result in each beneficiary's experiencing an annual decline in real benefits. If the CPI currently understates the change in the cost of living for Social Security recipients—perhaps because of differences between the purchasing patterns of beneficiaries and other consumers—then the existing decline in real benefits will be exacerbated.

The effects of such a change would differ from the impact of an across-the-board constraint on the increase in initial benefits (or an equivalent rise in the normal retirement age) in two ways. First, limiting the increase in initial benefits would have a progressively larger effect on each cohort. The impact on the baby-boom generation would be small, and current beneficiaries would not be affected. Reducing the COLA, by contrast, would affect all beneficiaries to some extent, and the benefits of all future cohorts would be reduced by roughly the same percentage.

Second, the effect of a lower COLA would accumulate over the years, so the change would generally have the largest impact on people who collected Social Security benefits the longest: older retirees, widows, and disabled beneficiaries. Even a relatively small annual cut in the COLA would greatly reduce benefits for those recipients. For example, if benefits were adjusted for the annual increase in the CPI minus 1 percentage point, by age 75 retired beneficiaries would incur a 12 percent reduction in benefits compared with what they would have received under current law. By age 85, their benefits would be 21 percent lower than under current law. And by age 95, they would incur a 28 percent cut.

If the COLA was set to equal the increase in the CPI minus 1 percentage point beginning in December 2004, Social Security outlays would be about 11 percent lower by 2050 than the amount projected under current law. Most of that reduction (in percentage terms) would be achieved by 2030. For example, outlays in 2030 would be 5.3 percent of GDP instead of 5.9 percent. Unlike in

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8. Advisory Commission to Study the Consumer Price Index, *Toward a More Accurate Measure of the Cost of Living: Final Report to the Senate Finance Committee* (December 1996).

the previous two options, however, spending would continue to grow as a percentage of GDP in later years.

Alternatively, lawmakers might choose to reduce cost-of-living adjustments only for Social Security recipients whose benefits or income was above specified levels; however, doing that would lessen the savings. (Some beneficiaries with low income and few assets would receive Supplemental Security Income benefits, which would offset some or all of the reduction in their Social Security benefits. The estimate above does not account for that offset, which would slightly reduce the amount of savings.)

3

The Long-Term Outlook
for Medicare and Medicaid

Twenty years ago, federal spending on Medicare and Medicaid, the two primary government-financed health care programs, was 2.2 percent of gross domestic product. In 2003, the programs accounted for 3.9 percent of GDP. Under the Congressional Budget Office's long-range scenarios, the federal costs of the two programs will range from 5.7 percent to 11.5 percent of GDP by 2030 and from 6.4 percent to over 21 percent by 2050 (*see Figure 3-1*).

Health spending growth is driven by two fundamental factors: demographics and medical costs per beneficiary (see Box 1-2 on page 4). Those factors affect both private and public spending, although the demographics have relatively greater effects on the latter because the aged and disabled—groups with higher-than-average costs—rely more heavily on public programs. Well-known demographic changes will drive long-term growth in Medicare spending and, to a lesser extent, in Medicaid spending. The Medicare population will expand rapidly as baby boomers retire, and even though subsequent cohorts of retirees will be smaller (at least through 2050), their greater longevity will result in continued growth in the number of beneficiaries.

Most of the options to constrain spending that have been proposed in the Congress or by health care experts would not substantially diminish the upward trajectory of the programs' spending. Substantially curtailing the growth rate of federal health spending will require addressing the underlying pressures that push up health costs overall and broader policy interventions than those commonly discussed.
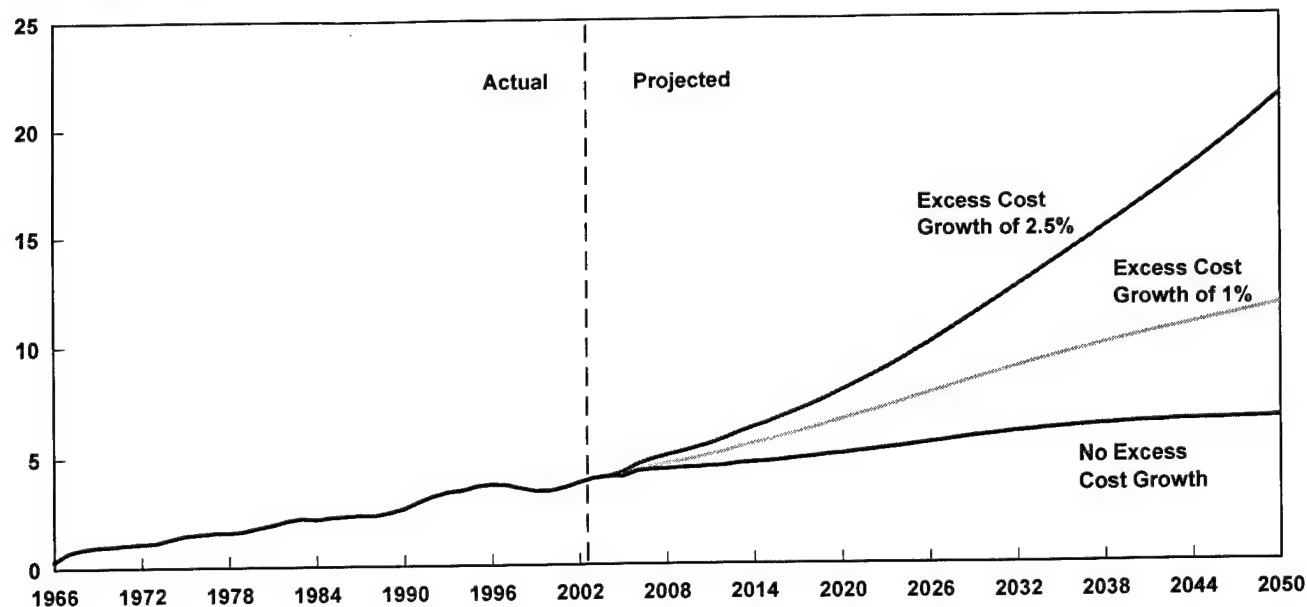
Background on Medicare

Medicare provides federal health insurance for 41 million people who are aged (about 85 percent of enrollees) or disabled or who have end-stage renal disease. Everyone who is eligible for Social Security benefits on the basis of age or disability is ultimately eligible for Medicare as well. The elderly become eligible for Medicare at age 65; the disabled become eligible 24 months after their Social Security benefits start. While Social Security's normal retirement age is scheduled to increase (see Chapter 2), Medicare's eligibility age is not set to change under current law.

Part A of Medicare, or Hospital Insurance (HI), covers inpatient services provided by hospitals as well as skilled nursing and hospice care. Part B, or Supplementary Medical Insurance (SMI), covers services provided by physicians and other practitioners, hospitals' outpatient departments, and suppliers of medical equipment. Home health care may be covered by either HI or SMI. Recently enacted legislation will add a voluntary prescription drug benefit in 2006 under a newly created

Figure 3-1.

Total Federal Spending for Medicare and Medicaid Under Different Assumptions About Excess Cost Growth

(Percentage of GDP)

Source: Congressional Budget Office.

Part D. In fiscal year 2003, Medicare spending totaled an estimated $278 billion. Nearly 40 percent of that spending went for inpatient hospital care, and one-quarter went for services provided by physicians and other practitioners *(see Table 3-1)*.

HI benefits are financed primarily by current workers' payroll taxes. Most of SMI is financed by general revenues, but enrollees' premiums cover 25 percent of the costs. However, the particular financing mechanism has no direct effect on total federal expenditures. Total expenditures for Medicare in 2003 were projected to be 2.4 percent of GDP.

In both HI and SMI, enrollees also pay part of the cost of most covered services through two cost-sharing mechanisms: deductibles and copayments. Most enrollees have supplemental coverage, which typically pays for much of Medicare's cost sharing and occasionally for some items that Medicare does not cover.

Although most Medicare enrollees receive their care through a fee-for-service system, 12 percent receive their care through private health plans (usually health maintenance organizations [HMOs]) that assume the risk and responsibility of providing Medicare benefits in exchange for predetermined monthly payments. Payments to those Medicare+Choice (M+C) plans are based in part on costs in the fee-for-service sector, but all plans are guaranteed a minimum payment. Those plans have typically offered enrollees lower cost sharing than that required under the fee-for-service system and often have enhanced the benefit package to include services that traditional Medicare does not cover.

Background on Medicaid

Medicaid is a joint federal/state program that pays for health care services for a variety of low-income individuals. In fiscal year 2003, federal spending on the program totaled about $161 billion. But CBO estimates that total spending on Medicaid was about $270 billion—almost

Table 3-1.

Medicare Spending by Type of Service, Fiscal Year 2003

	Billions of Dollars	Percentage of Total Spending
Inpatient Hospital Services	109.3	39
Physicians' and Other Suppliers' Services	70.3	25
Managed Care Services	36.3	13
Skilled Nursing Facility Services	13.8	5
Outpatient Hospital Services	13.0	5
Home Health Agency Services	10.0	4
Hospice Services	5.9	2
Other Services	14.1	5
Administrative Expenses	5.3	2
Total	**277.9**	**100**

Source: Congressional Budget Office preliminary estimates based on Department of the Treasury, *Monthly Treasury Statement* (September 2003).

as much as for Medicare. The federal government's share varied among states but averaged 57 percent.

States administer their Medicaid programs under federal guidelines, which specify a minimum set of services that must be provided to certain poor residents, but eligibility and benefits vary among states. States have broad flexibility and may include additional groups (such as individuals with high medical expenses) and may provide additional benefits, such as prescription drugs and dental services. (When Medicare's prescription drug benefit takes effect in 2006, beneficiaries covered by both Medicaid and Medicare will have their prescription drug benefits covered by Medicare rather than Medicaid.) By one estimate, spending on optional populations

and benefits accounted for about 65 percent of Medicaid spending in 1998.[1]

By CBO's estimates, the Medicaid program covered about 51 million individuals in 2003, about three-quarters of whom were poor children and their parents, poor pregnant women, and other poor nonelderly adults. Per capita costs for those groups are relatively low. In contrast, expenses are higher for elderly and disabled beneficiaries, who often require long-term care. Although they are about a quarter of beneficiaries, they account for over 70 percent of spending, with long-term care accounting for about three-eighths of all costs (*see Table 3-2*).

Medicaid covers many costs for low-income Medicare beneficiaries, including Medicare premiums and cost sharing and also services not covered by Medicare. Therefore, efforts to reduce growth in Medicare spending will generally result in faster growth in Medicaid spending.

Growth in the Programs' Costs

Medicare

From 1970 to 2003, Medicare costs increased nearly tenfold in real terms (adjusted for inflation). As a share of GDP, costs rose from 0.7 percent to 2.4 percent. They have grown in part because of increased enrollment (from 20 million in 1970 to 41 million this year) and an increase in the average age of beneficiaries. In addition, costs per enrollee grew at a rate 3.0 percent faster than per capita GDP (*see Figure 3-2*). That "excess cost growth" in Medicare has been due primarily to the same factors that have led to increases in health care spending in the nation as a whole—most notably, the increasing use of new medical technologies adopted partly because neither doctors nor patients have strong incentives to control costs. Legislative and administrative

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1.   Henry J. Kaiser Family Foundation, Kaiser Commission on Medicaid and the Uninsured, *Medicaid "Mandatory" and "Optional" Eligibility and Benefits* (Washington, D.C.: Henry J. Kaiser Family Foundation, July 2001), p. 12.

Table 3-2.

Distribution of Medicaid Enrollees and Benefit Payments by Eligibility Category, 2000

(Percent)

Eligibility Category[a]	Distribution of Enrollees	Distribution of Benefit Payments		
		Acute Care Benefits	Long-Term Care Benefits[b]	Total Benefits
Aged	9.8	8.3	20.0	28.3
Disabled	17.2	27.0	16.6	43.6
Children	48.5	15.1	1.4	16.6
Adults	24.5	11.3	0.3	11.6
Total	**100.0**	**61.8**	**38.2**	**100.0**

Source: Congressional Budget Office.

Note: The numbers do not include enrollment or spending for Medicaid programs in U.S. territories.

a.   Disabled enrollees include some people who are over age 65 or under age 18. Adult enrollees are adults who are not aged or disabled; they are primarily poor parents and pregnant women.

b.   Long-term care includes payments for care in nursing homes and intermediate-care facilities for the mentally retarded, home health services, and other community-based services.

changes have also contributed to the growth in Medicare costs per enrollee.

Medicaid

From 1970 to 2003, the federal share of Medicaid costs increased by a factor of 13 in real terms. As a share of GDP, federal costs rose from 0.3 percent to 1.5 percent. That growth has been driven primarily by increased enrollment and excess cost growth.

The number of beneficiaries is affected by a combination of demographic forces, policy changes at the federal and state levels, and the health of the economy. Costs increase not only as the number of people in Medicaid increases but especially as that population ages, boosting the proportion receiving long-term care services. Policy changes such as states' actions to expand eligibility for home and community-based services for the disabled result in higher costs. Other changes, like federal restrictions on eligibility for legal immigrants, reduce costs. Because eligibility for Medicaid is tied to income, changes in unemployment and poverty rates affect the number of individuals eligible for the program. For example, increases in the unemployment rate have typically led to higher enrollment of poor children.

States negotiate the prices of services with providers, and the costs of those services grow with medical price inflation in general. But costs per beneficiary grow faster than prices because of increases in the number and complexity of services, as described in Box 1-2. Because of the labor intensity of nursing home and custodial care services provided mainly to the aged and disabled populations, wage pressures have a particularly large effect on Medicaid costs. Increases in the utilization of prescription drugs, which are covered by Medicaid, have also contributed to excess cost growth. Finally, costs per beneficiary have increased with state policies that have expanded the scope of their benefit package, such as allowing more visits per patient per month.
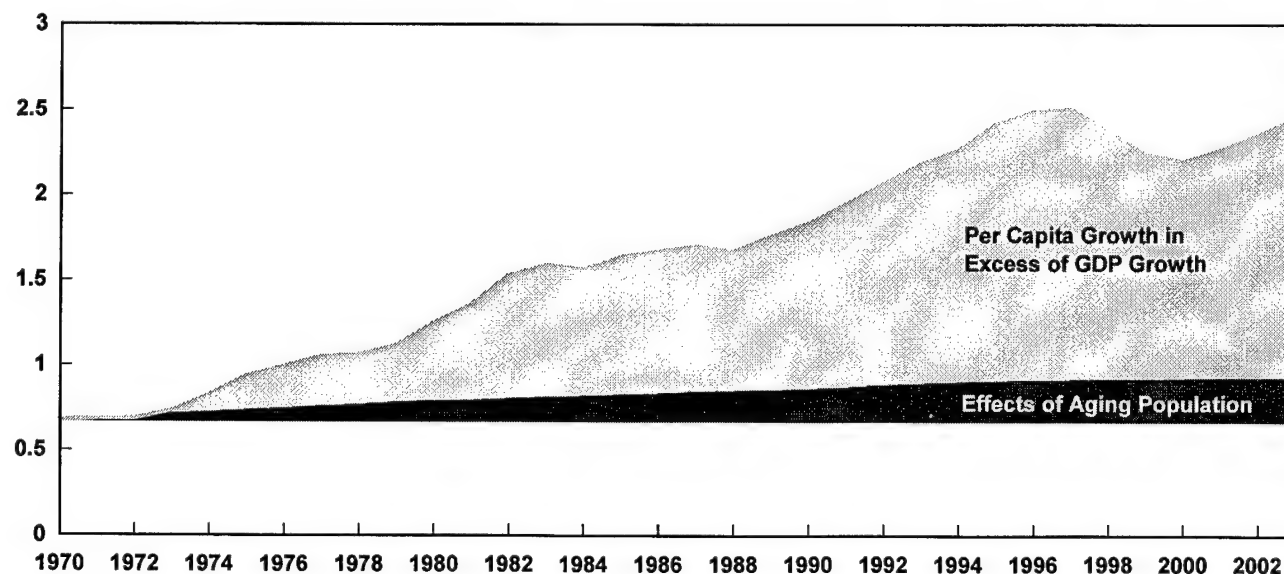
Federal costs have increased even faster than overall cost growth when states have succeeded in shifting the burden. A primary example occurred in the early 1990s and again in the late 1990s, when states overstated their payments to providers and retained the additional money from the federal reimbursement.

Projections of Medicare and Medicaid Costs

Long-term projections of Medicare and Medicaid spending are subject to considerable uncertainty from a

Figure 3-2.

Sources of Medicare Cost Growth

(Percentage of GDP)

Source: Congressional Budget Office.

variety of sources. However, the dominant source of uncertainty is the future rate of growth of Medicare and Medicaid spending per enrollee relative to the growth of per capita GDP. For this report, CBO presents projections under three scenarios:

■   Spending per enrollee grows 2.5 percent faster than per capita GDP;

■   Spending per enrollee grows 1 percent faster than per capita GDP; and

■   Spending per enrollee grows at the same rate as per capita GDP.[2]

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2.   For the scenario assuming 1 percent excess cost growth, CBO uses its baseline for the first 10 years. The baseline follows current law, which includes statutory restraints on cost growth. The excess cost growth in year 11 is set to 0.7 percent, the average of the first 10 years, and over the next 14 years, the rate moves gradually to the ultimate rate of 1 percent. For the other scenarios, the applicable growth rates begin in 2005.

The three scenarios represent vastly different assumptions about the future path of Medicare and Medicaid spending. The middle-cost scenario, which assumes that growth in spending per enrollee will outpace per capita GDP by 1 percent, is consistent with the Medicare trustees' assumption for their long-range forecasts. Nevertheless, the assumed rate of spending growth is substantially slower than the 3.0 percent excess cost growth that Medicare has experienced since 1970 or even the 1.7 percent growth observed since 1990. In their long-range forecasts, the Medicare trustees assume that the development and increasing use of new medical technologies will cause spending per enrollee to continue to grow faster than per capita GDP but that significant pressures will be brought to bear on the entire health care system to reduce the differential to 1 percent. That assumption rests in part on the belief that much higher levels of excess cost growth in national health expenditures are not sustainable in the long run because they would lead to an implausibly large fraction of GDP being devoted to health care and that, in the long run, the per capita

growth of Medicare costs cannot deviate significantly from that of national health care costs.[3]

Under the middle-cost scenario, Medicare costs would grow from 2.4 percent of GDP today to 8.3 percent in 2050. Total federal costs for Medicare and Medicaid would grow from 3.9 percent of GDP in 2003 to 11.5 percent in 2050 (see Figure 3-1). Those projections, like all of those presented in this chapter, include projected federal expenditures that will be incurred as a result of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (Public Law 108-173).

The low-cost scenario, in which Medicare and Medicaid spending per enrollee is assumed to grow at the rate of per capita GDP, would require even larger changes in the overall health care system to constrain costs. Under that scenario, the growth in Medicare and Medicaid costs as a percentage of GDP is due solely to changes in the size and demographic composition of the enrolled populations. Even under that optimistic scenario, Medicare costs would grow to 4.9 percent of GDP in 2050, and federal costs for the two programs would grow to 6.4 percent of GDP.

The high-cost scenario, in which the assumed rate of excess cost growth of 2.5 percent is slightly lower than the long-term historical average, results in future costs that are seemingly unsustainable. Federal costs for Medicare and Medicaid as a percentage of GDP would double to 7.8 percent in 2020, hit 15.1 percent in 2038, and reach 21.3 percent in 2050. To put those estimates in perspective, the entire federal budget currently consumes 20 percent of GDP.

Options for Slowing Spending Growth

Medicare
Federal spending on Medicare can be restrained in three ways:

- Reduce the number of people receiving benefits,

- Reduce the share of costs paid by the government, or

- Reduce the total cost per beneficiary.

Reducing the number of people who are eligible for Medicare would shift costs from the Medicare program to those people who lost their coverage. Reducing the government's costs per enrollee by increasing the share of costs paid by enrollees would shift costs to those individuals. That change might be part of an attempt to reduce the total cost per beneficiary by increasing the efficiency of the health care system. Costs might be reduced through competition or disease management, but there is currently too little evidence to conclude that such approaches would significantly reduce Medicare's total costs.

Reduce the Number of Enrollees by Raising the Age of Eligibility. Gradually raising the Medicare eligibility age to 67 in 2027 would be consistent with the currently scheduled increases in the normal retirement age for Social Security benefits. Raising the age of eligibility to 67 would reduce Medicare's enrollment by about 7 percent and spending by about 3 percent, compared with what they would be under current policies. Spending would fall by less than enrollment because younger beneficiaries are healthier and less costly than average.

Increasing the eligibility age to 70, perhaps in conjunction with a similar increase in Social Security's normal retirement age, would have a larger impact on costs. After such a policy was fully phased in, enrollment would be about 18 percent lower than it would be under current law, and costs would be about 9 percent lower. But even that relatively dramatic policy change would do little to address the long-range fiscal challenge facing Medicare.

The reduced spending for Medicare would be partially offset by increased spending under Medicaid and the Federal Employees Health Benefits program—both of which would have to cover part of the health care costs of their beneficiaries whose eligibility for Medicare had been delayed. However, spending would be reduced for

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3. See Technical Review Panel on the Medicare Trustees Reports, *Review of Assumptions and Methods of the Medicare Trustees' Financial Projections* (December 2000).

the military's TRICARE for Life program, which requires that enrollees be in Medicare. On net, the increase in spending for those three programs would equal roughly 10 percent to 15 percent of the savings in Medicare.

Increasing Medicare's eligibility age would shift costs to enrollees and to employers. People who retired before becoming eligible for Medicare might have difficulty obtaining health insurance, and the higher costs might further reduce the number of employers who offered health benefits to retirees. Also, the affected population would have a stronger incentive to apply for Social Security disability benefits, reducing the net savings to the federal government (an effect that is not estimated here).

Reduce the Share of Costs Borne by the Government.
Currently, beneficiaries pay part of the Medicare program's costs through SMI premiums, copayments, and deductibles. Any or all of those could be increased, reducing the percentage of total costs borne by the government. SMI premiums currently cover 25 percent of costs in that portion of the program, and premiums for the new prescription drug benefit are set at a similar level.[4] Once the prescription drug plan is phased in, premiums for the entire Medicare program will equal 13 percent to 14 percent of its total costs. Therefore, a policy that doubled premiums would reduce net Medicare costs by a comparable amount.[5]

Increasing copayments or deductibles would lower the share of costs borne by the federal government and could raise the efficiency of health care or even reduce total expenditures by making enrollees more sensitive to the costs of health care services and thus more judicious

in seeking those services. However, the effect would probably be weak in Medicare because so many beneficiaries have supplemental coverage that pays for cost sharing. Beneficiaries with supplemental coverage would not directly experience the higher costs of care, although their supplemental premiums would grow over time. To be most effective at bringing costs into line with the value of services, a policy of increasing beneficiaries' cost sharing should be combined with rules that limit supplemental coverage.

Even without increases in Medicare's cost-sharing requirements, changes to rules governing individuals' private supplemental insurance would generate savings by exposing enrollees to at least some of Medicare's existing cost sharing. Greater savings would be realized by prohibiting all private supplemental insurers from paying for Medicare's cost sharing. CBO has previously estimated the effects of a variety of options for increasing Medicare's cost sharing.[6]

Reduce Payments to Providers. Over Medicare's history, the Congress often has changed payments to health care providers to slow the growth in per capita spending—often lowering the increase, or update, to the annual payment rate that would have otherwise applied. That sort of strategy might generate savings in the short run but would do little to address the underlying sources of spending growth. Because Medicare limits the amount that providers may charge enrollees over and above the program's payment rates, if providers could not charge enough to cover the costs of providing a service, this policy could restrict Medicare patients' access to care.

Adopt Other Strategies to Reduce Medicare Costs. Other approaches proposed to control costs would introduce greater competition into the Medicare market, convert Medicare to a defined-contribution system, and employ disease management and case management.

For instance, private health plans could be stimulated to compete through premiums to a greater extent than they do today. Such an approach might reduce costs if private

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4. Part D premiums will cover roughly one-quarter of the drug benefit but not 25 percent of Part D costs. A subsidy to low-income beneficiaries and the payments to third parties that currently provide coverage do not factor into the calculations of premiums. In addition, the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 would raise SMI premiums for single enrollees with income above $80,000 and for couples with income above $160,000.

5. That estimate assumes that enrollments in Parts B and D would not change as a result of the higher premiums.

6. See Congressional Budget Office, *Budget Options* (March 2003), pp. 154-162.

plans were able to provide Medicare services at a lower cost per enrollee than the Medicare fee-for-service system could and beneficiaries had sufficient incentives to join efficient health plans. A related approach would limit what Medicare contributed to health expenses through a defined contribution. Under that approach, the federal government would make a contribution toward the total premium of the health plan chosen by each beneficiary (which could include private plans as well as Medicare's traditional fee-for-service plan). Beneficiaries would be responsible for the portion of the premium exceeding the government's contribution. A defined contribution could strengthen beneficiaries' and providers' incentive to seek efficient modes of care. Depending on the level of the benefit and the response of beneficiaries, providers, and health plans, such an approach might (but would not necessarily) increase the costs borne by beneficiaries. Moreover, there is little experience on which to base long-range estimates of the cost savings, if any, from introducing those approaches to Medicare or to assess their effects on beneficiaries.

Finally, proponents of disease management and case management claim that adding those benefits to Medicare will improve the quality of care that enrollees receive and lower costs at the same time. Because Medicare's expenditures are concentrated among a small number of high-cost enrollees (for whom high expenditures often persist over time), savings could come from preventing the use of expensive services by better coordinating existing resources or using preventive care. However, whether disease management or case management can improve health outcomes, much less produce long-term savings, is not yet known.

Medicaid

Although states have wide latitude to determine the scope of the Medicaid program, there are several avenues for the federal government to reduce the growth of Medicaid spending. The federal government could reduce its contribution to the program through a variety of mechanisms. Alternatively, it could restrict mandatory benefits and coverage groups and the options available to the states for providing coverage beyond the minimum. The federal government could also shift the costs of Medicaid to beneficiaries by requiring greater

cost sharing or making the requirements for receiving long-term care services more rigorous.

Reduce the Overall Federal Contribution. The federal contribution to each state is set by formula related to the per capita income in the state. Poorer states receive higher federal matching rates, but no state can receive less than a 50 percent match. The federal government could reduce the federal match either through an across-the-board cut or by reducing the minimum rate, which will apply to 12 states in fiscal year 2005.

Another means of reducing the federal contribution would be to convert some or all of the funding for the program into a block grant. Each year, the federal government could set a spending limit in advance. States would still have to match those federal dollars, but federal funds would be cut off when the allotment was exhausted. The policy could be implemented for a category of services or population. For example, the federal government could cap funding for long-term care services, or it could cap the federal contribution for each beneficiary, which would lessen the impact on states with growing populations. Supporters argue that converting part or all of the program into a block grant would give the federal government more control over spending and give states stronger incentives to spend funds judiciously. The approach also would end states' incentives to employ funding strategies that were designed to maximize federal assistance. Opponents argue that block grants would cause some states to cut needy poor individuals from the rolls.

Reduce Mandatory Benefits or Restrict Coverage. In lieu of reducing its contribution to the program, the federal government could reduce mandatory benefits and restrict coverage groups and the additional coverage that states could choose to offer. The federal government could also stop granting waivers of the Medicaid statute, which states have frequently used to extend coverage to new populations.

Increase Costs Shared by Beneficiaries. Under current law, states are permitted to charge beneficiaries only nominal amounts. The federal government could shift costs to beneficiaries by allowing or requiring states to institute higher deductibles and copayments. To the ex-

tent that beneficiaries reacted to the higher costs by us-ing fewer services, total health care costs would also fall. Opponents to higher cost sharing fear that beneficiaries might forgo necessary treatment, which could lead to poorer health and possibly greater demand for more ex-tensive treatment later.

Encourage the Use of Lower-Cost Services. The federal government could also reduce spending on long-term

care services by encouraging the expansion of commu-nity-based alternatives to nursing home care. Commu-nity-based care is usually much less expensive per person than institutional care is; however, the demand for com-munity-based services is greater than the demand for institutional care and is more likely to substitute for in-formal care provided in the home.

The Long-Term Outlook
for Other Federal Spending

I n 2003, about one-half of the federal government's spending was for programs and activities other than Social Security, Medicare, Medicaid, and net interest on the public debt. That other spending covers both discretionary programs (which are funded through the annual appropriation process) and mandatory programs (which are usually funded according to underlying statutes that establish eligibility and payment standards) —as well as offsetting receipts. The Congressional Budget Office's most recent 10-year baseline projections indicate that those activities will continue to account for a sizable share of federal spending—about 42 percent— in 2013. Consequently, the policies that guide those programs will continue to have a significant effect on the federal budget even as the "big three" entitlement programs demand more resources.

Discretionary Spending

One distinct pattern in the federal budget over the past 40 years is the diminishing share of spending provided through annual appropriations—spending that pays for much of what many Americans think of when they picture the activities of the federal government. Outlays for national defense, highways, the national park system, education, research and development, and the federal workforce all fall within the category of discretionary spending. As a share of the budget, such spending has declined from 68 percent in 1962 to 38 percent in 2003.

Over the same period, it has also diminished in relation to the size of the economy, falling from 13 percent of gross domestic product to 8 percent (*see Figure 4-1*).

As a share of GDP, total discretionary spending over the past 40 years peaked at 13.6 percent in 1968, driven by defense outlays that reached 9.4 percent of GDP at the height of the Vietnam War. Similarly, the trough in discretionary spending that occurred in 1999 reflected the bottoming out of defense expenditures at 3.0 percent in 1999 and 2000. In contrast, nondefense discretionary spending as a share of GDP varied over a narrower range—from 3.2 percent (1999) to 5.2 percent (1980).
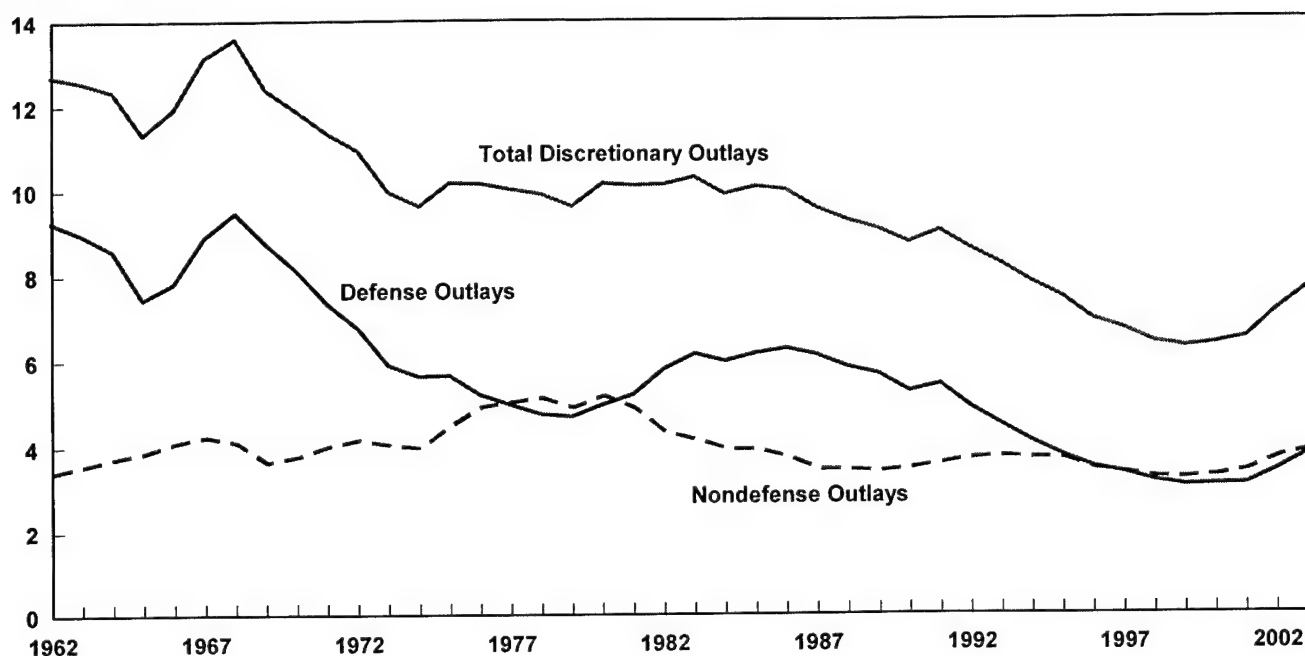
Defense Discretionary Spending

Since World War II, defense spending has fluctuated significantly but generally trended downward. With the exception of the Korean War (1950 to 1953), the Vietnam War (1962 to 1973), and the defense buildup during the Reagan Administration (1982 to 1986), the past 50 years have been characterized by periods of slow growth or even declines (in nominal terms) in such spending.

Real (inflation-adjusted) defense spending over the past 20 years has averaged about $380 billion annually in 2003 dollars, ranging from about $460 billion (1986 and 1987) to about $305 billion (1998 and 1999). By

Figure 4-1.

Discretionary Spending

(Percentage of GDP)

Source: Congressional Budget Office.

2003, however, defense-related outlays had exceeded their 20-year average, and they are likely to remain above it for a number of years because of the United States' involvement in Iraq and Afghanistan.

For the purposes of its long-range budget projections, CBO developed two alternative paths for defense discretionary spending. The higher spending path would follow CBO's projection of costs for the Bush Administration's 2004 Future Years Defense Program through 2022 and thereafter maintain the 2022 real spending level (that is, the 2022 level increased at the rate of the consumer price index, or CPI). Defense outlays under that approach, which includes allowances for cost risks and continued additional spending to support the global war on terrorism, would rise initially from 3.8 percent of

GDP in 2003 to 4.0 percent in 2004 but then gradually decline, eventually reaching 2.0 percent by 2050.[1]

CBO's lower path for defense spending would set a long-run target equaling the average real spending level of the past two decades ($380 billion) and then gradually lower outlays over a period of years (in this case, through 2022) to reach it. Thereafter, spending would grow at the rate of the CPI. As a share of GDP, defense spending under that approach would fall to 1.4 percent by 2050.

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1. See Congressional Budget Office, *The Long-Term Implications of Current Defense Plans: Summary Update for Fiscal Year 2004* (July 2003). Cost risks are additional spending based on the military's historical expenditures to maintain new weapon systems and to support forces engaged in international peacekeeping activities.

Although projecting outlays as a constant share of GDP may be appropriate for some categories of spending, it seems less appropriate in the case of defense. Defense spending has trended downward fairly steadily from 9.4 percent of GDP in 1968 to 3.8 percent in 2003, and there is little historical basis for concluding that defense spending will continue at a fixed percentage of GDP.[2]

Nondefense Discretionary Spending

Appropriated spending for government activities such as education, housing, highways, and national parks has been a roughly constant share of GDP over the past 40 years. Except for the 1975-1983 period, during which the share of nondefense discretionary spending rose to about 5 percent for several years, that category of outlays has generally ranged between 3 percent and 4 percent of GDP since 1962. For the past 20 years, the range has been from 3.2 percent to 3.9 percent, for an average of 3.6 percent. Therefore, CBO used a fixed share of GDP—the 20-year average of 3.6 percent—as one potential path for nondefense discretionary spending.

A lower-cost alternative path developed by CBO used the baseline-related notion of constant real spending at the 2003 level—that is, the 2003 appropriations adjusted for inflation.[3] Under that approach, nondefense discretionary spending would fall from 3.9 percent of GDP in 2003 to 1.8 percent in 2050.

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2. If defense spending in 2050 was set to claim the same proportion of GDP that it does today, the real spending level would be more than two and a half times that of the current defense budget. In other words, maintaining defense spending at a constant share of GDP would be equivalent to funding a military force that was 25 percent to 67 percent larger than the force that was fielded in the 1980s to counter the existing Soviet threat.

3. The rules for constructing baselines, which are contained in the Balanced Budget and Emergency Deficit Control Act of 1985, call for inflating discretionary appropriations by using a wage inflator for personnel costs and the GDP deflator for non-pay-related expenses. For the purposes of this analysis, CBO implemented the concept of constant dollars by employing the consumer price index, which is projected to rise at an annual rate of 2.5 percent by the end of CBO's 10-year baseline projection period. That rate is reasonably close to the rate of the aggregate inflator used under the current baseline procedures.

Assuming a constant share of GDP ignores the higher spending levels of the late 1970s as well as the recent surge above the 20-year average that began in 2002. Certainly, political pressures could lead policymakers to continue increasing domestic discretionary outlays, but given the historical pattern of such spending and the increasingly tight fiscal constraints that will develop as the baby boomers retire, a spending path reflecting that assumption was not considered highly likely.

Other Mandatory Spending

This category is an amalgam of federal entitlement programs (other than the "big three") and receipt accounts that range from federal civilian and military retirement to unemployment compensation, food stamps, and receipts from leasing drilling rights on the Outer Continental Shelf.[4] Spending for that group of activities, after settling down from highs during the mid-1970s to the early 1980s, has slowly moved up or down around a 20-year average of about 2.4 percent of GDP (*see Figure 4-2*). The discussion that follows separates spending for unemployment insurance from other spending because of its severe volatility, which is tied to the ups and downs of the business cycle.

Unemployment Insurance

Over the long run, spending for unemployment insurance is likely to follow the growth of the workforce and of weekly earnings. The bulk of the spending is for regular weekly benefits. Many states automatically tie those benefits to the growth of average weekly wages; a number of other states periodically update benefit amounts to keep pace. States levy taxes on employers to fund the unemployment benefits they pay. Both those taxes and the state-funded benefits are included in the federal budget.
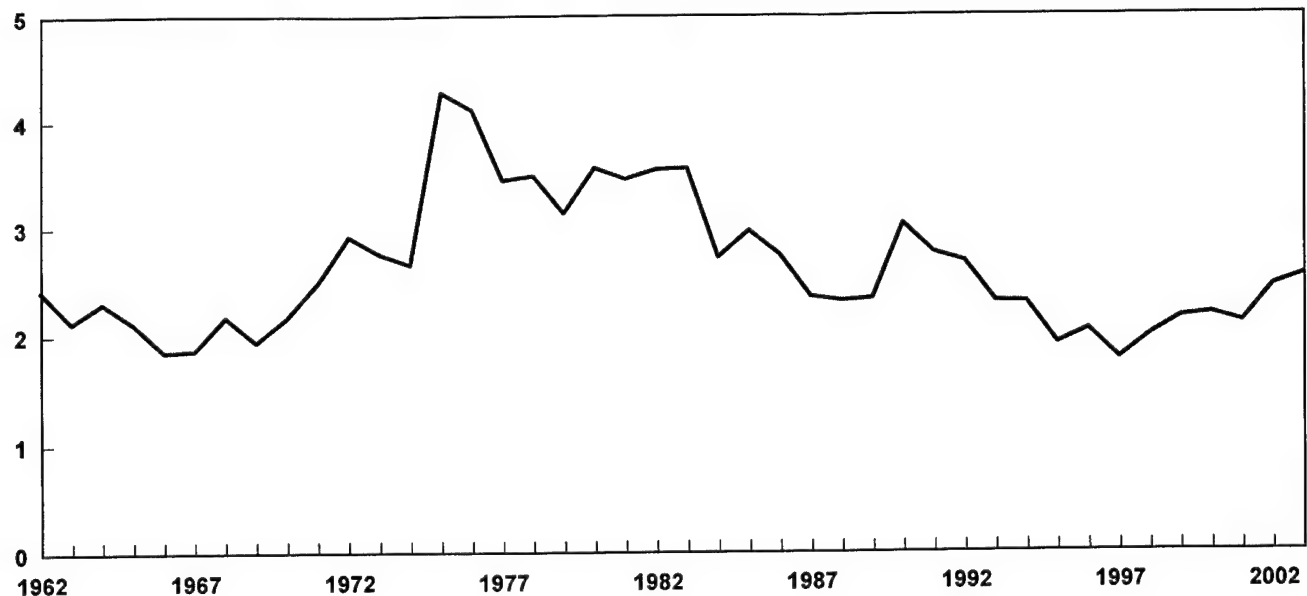
However, in addition to the states' unemployment spending, the federal government shares the costs of some types of benefits and often, in periods of high unemployment, pays 100 percent of the benefits for workers who have been unemployed for a long period. Those

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4. This category includes Medicare premiums as a component of offsetting receipts (see Chapter 3).

Figure 4-2.

Mandatory Spending Other Than for Social Security, Medicare, and Medicaid

(Percentage of GDP)

Source: Congressional Budget Office.

Note: The other mandatory spending shown here includes offsetting receipts.

payments are generally funded by federal unemployment taxes.

Over the past two decades, outlays for unemployment benefits have been relatively large when unemployment rates were high (in 1984, from 1991 to 1994, and in 2002 and 2003), but such spending moderated during periods of economic expansion. Spending for benefits as a percentage of GDP averaged 0.35 percent over the past 20 years but reached as high as 0.60 percent and fell as low as 0.21 percent. On the basis of those calculations, CBO concluded that the 20-year average share of GDP was a reasonable target for the long-run spending level. Because CBO's August 2003 baseline reaches that share in 2006, unemployment insurance benefits are fixed at that level from 2006 to 2050 in CBO's long-term projections.

Other Mandatory Spending and Receipts

CBO adopted two alternatives for its projections of the remaining mandatory spending programs and receipts. For its high and intermediate paths for spending, CBO

assumed that other mandatory outlays—including all offsetting receipts except Medicare premiums (0.2 percent of GDP)—will maintain their average of the past two decades, or 2.2 percent of GDP. A lower spending trajectory is framed in CBO's August 2003 baseline. There, the projections of spending for those programs show a slightly declining claim on the economy over the next 10 years. Extrapolating a small annual decline over the 2004-2050 period yields a share of 1.4 percent of GDP in 2050.

Offsetting receipts from Medicare premiums are treated separately. They are estimated as a share of Medicare spending under the various scenarios but are included along with other mandatory spending and receipts.

Those overall projections encompass spending trajectories for individual programs that are likely to be quite varied. Retirement programs for federal employees, for example, will probably grow more slowly than the economy does because the federal civilian workforce is relatively stable and the number of military personnel is

declining. The GDP share of means-tested benefit programs such as Temporary Assistance for Needy Families and the Social Services Block Grant may shrink either because the programs have a fixed appropriation or because economic growth will shrink the portion of the population that meets their eligibility thresholds for income and resources. However, other mandatory spending programs, such as health care for Department of Defense retirees, are likely to grow faster than the economy.[5]

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5. CBO's long-term budgeting model operates within a national income and product accounts (NIPAs) framework rather than a federal budget structure. The major differences between the two involve their treatment of federal employee retirement programs and deposit insurance. The former are treated in the NIPAs as if they are private savings rather than federal activities; the latter is excluded because the outlays are not considered to represent current income. Although the differences are noticeable, they have no apparent effect on the trajectory of spending for the category of other mandatory spending and receipts.

5

The Long-Term Outlook
for Revenues

The federal government collects revenues through individual income taxes, corporate income taxes, social insurance (payroll) taxes, excise taxes, estate and gift taxes, customs duties, and miscellaneous receipts. Individual income taxes are the largest source, producing about half of all revenues and, in recent years, raising between 8 percent and 10 percent of gross domestic product. Social insurance taxes (mainly for Social Security and Medicare's Hospital Insurance) are the second largest source of receipts, making up about a third of total revenues and a little less than 7 percent of gross domestic product. Corporate income taxes contribute about 10 percent to overall revenues and represent approximately 1 percent to 2 percent of GDP. Revenues from other taxes and duties and miscellaneous receipts make up the balance, constituting about 1.5 percent of GDP.

The Past 50 Years

In the past half-century, total revenues have ranged from 16.1 percent to 20.8 percent of GDP, with no obvious trend over time (see Figure 5-1). On average, their share of GDP has hovered around 18½ percent. During that period, however, the various sources of revenue have changed in importance. The contribution to overall revenues made by excise taxes and corporate income taxes has declined fairly steadily, from a combined share of more than 8 percent of GDP in 1953 to less than 3 per-

cent today. At the same time, social insurance taxes as a percentage of GDP have grown from about 2 percent to nearly 7 percent. The share of individual income taxes has varied from 7.1 percent to 10. 3 percent of GDP and has shown a slight upward trend.

Much of the variation in the composition of total tax revenues has been legislative in nature, as policymakers have altered tax rates and other characteristics of the tax system. However, some of that variation has resulted from the interaction between the tax code and changes in the economy. For example, excise tax receipts tended to decline over time as a percentage of GDP because many are specific levies (such as cents per gallon of gasoline) and so diminished in importance as the economy experienced inflation. In contrast, income tax receipts tended to increase relative to GDP when inflation caused various thresholds in the income tax system to decline in real (inflation-adjusted) terms and therefore boosted the amount of income subject to taxation at higher rates. Over the years, legislators have often changed those parameters of the tax system to try to offset the impact of such economic changes on taxes. In the case of the individual income tax, much of the system was eventually indexed to prevent inflation from raising that levy's share of GDP. Yet without adjustments, a host of characteristics of the current tax system continue to interact with economic conditions and cause receipts to grow faster or slower than GDP.

Figure 5-1.

Sources of Federal Revenues over the Past 50 Years

(Percentage of GDP)

Source: Congressional Budget Office.

Potential Futures for Federal Revenues

As in the past, all sources of revenue will continue to be subject to legislative discretion over the long term. However, in the absence of such discretion, the individual income tax system has the most potential to change the ratio of revenues to GDP because of the various ways in which its structure interacts with the economy.

First, that system is progressive, which means that households with higher incomes are taxed at higher rates. Consequently, as GDP—and thus individual incomes—grow, a larger and larger proportion will be subject to higher tax rates. The growth of income will both increase the amount of income taxed at the highest rates and decrease the amount of earned income tax credits claimed on low-income tax returns. Because much of the tax system is indexed for inflation, that phenomenon will occur primarily with respect to real GDP growth. But some effect from inflation on the parts of the regular income tax system that are still not

indexed will cause additional, although modest, increases in receipts relative to GDP over the next 50 years.

Second, the individual income tax system includes an alternative minimum tax, which subjects more taxpayers and a greater fraction of income to higher rates as GDP grows. The AMT is a parallel income tax system with fewer exemptions, deductions, and rates than the regular income tax. Households must calculate their tax liability (the amount they owe) under both the AMT and the regular income tax and pay the higher of the two.[1] The AMT is not indexed for inflation; therefore, sustained inflation causes it to affect more taxpayers (as nominal income rises over time) and to claim an ever-larger share of GDP.

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1.   Technically, a taxpayer owes the regular income tax plus any amount by which the AMT exceeds the regular tax.

Third, current tax law provides for rates to increase in 2011. Most of the various tax cuts legislated in the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA) and the Jobs and Growth Tax Relief Reconciliation Act of 2003 (JGTRRA) are scheduled to expire at the end of 2010; the rest expire even sooner. As the tax code reverts to prior law, tax rates will rise, some credits will shrink, and thresholds for certain rates will shift. Those changes will increase the level of receipts as a share of GDP, both immediately and in the future.

Fourth, over the next 50 years, the Treasury will receive some tax revenues that have essentially been deferred. Contributions to retirement plans, such as 401(k) and individual retirement accounts, and contributions to employer-sponsored defined-benefit plans are tax-exempt when they are made. The income earned on assets in those accounts is also exempt. Those sums will become a rising portion of taxable income as the baby boomers retire, which will tend to boost receipts relative to GDP.

At least one factor will move receipts in the other direction, however, causing individual income tax revenues (as well as revenues from Social Security and Medicare payroll taxes) to shrink as a percentage of GDP during the next half-century. The share of employees' compensation that is paid in the form of wages and salaries (which are subject to income and payroll taxes) is projected by the Congressional Budget Office to decrease over time, in part because of the rising costs of non-taxable fringe benefits, such as employer-paid health insurance. That declining share will reduce taxable income and therefore tax revenues relative to GDP.
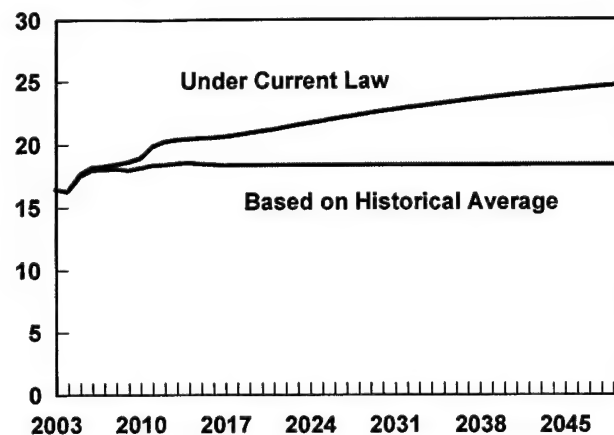
Illustrative Revenue Paths

The long-term budget scenarios outlined in Chapter 1 assume one of two possible paths for revenues, based on different approaches to tax policy. One approach is to enact a series of legislative changes that would keep receipts close to their historical average share of GDP. That outcome could be achieved either through changes in the individual income tax system or through shifts among the various types of taxes. Consequently, the first path is one in which receipts remain steady at 18.4 percent of GDP—the average of the past 30 years—begin-

Figure 5-2.

Total Federal Revenues Under Alternative Paths, 2003 to 2050

(Percentage of GDP)

Source: Congressional Budget Office.

Note: The historical-average values are based on 30-year historical averages, beginning in 2012.

ning in 2012 *(see Figure 5-2)*. That percentage is the level that would result if the provisions of EGTRRA and JGTRRA were extended and the AMT was indexed for inflation beginning in 2005.

The second path is an extrapolation of current law. It assumes that the provisions of EGTRRA and JGTRRA expire (or "sunset") as scheduled, that policymakers do not modify the AMT, and that no changes are made in tax law to slow the automatic increase in taxes that results from the interaction of economic growth and the progressive structure of the income tax. Although there is some tendency over the long term for taxable wage and salary income to decline as a proportion of compensation, the overwhelming effect of the tax system's current-law features is to raise receipts relative to GDP. Consequently, receipts rise to 24.7 percent of GDP by 2050 in the current-law path and are 6.3 percentage points higher than in the historical-average path.
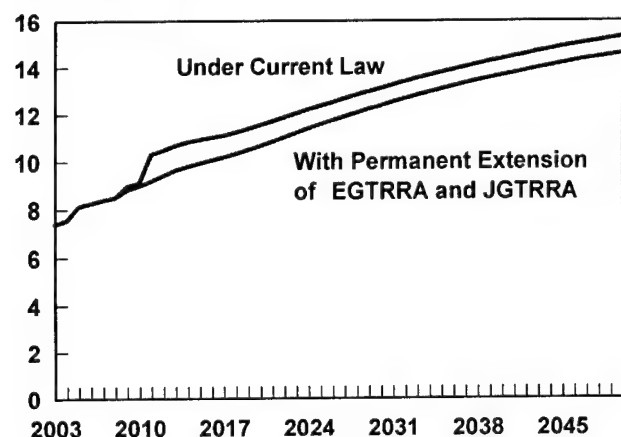
Details of the Current-Law Path

In the current-law path, the individual income tax is responsible for the rise in revenue relative to GDP. Two of the factors that drive the increase in individual income tax receipts as a share of GDP are currently the subject

Figure 5-3.

Individual Income Tax Liabilities Under Current Law or with a Permanent Extension of EGTRRA and JGTRRA, 2003 to 2050

(Percentage of GDP)

Source: Congressional Budget Office.

Note: EGTRRA = Economic Growth and Tax Relief Reconciliation Act of 2001; JGTRRA = Jobs and Growth Tax Relief Reconciliation Act of 2003.

of considerable legislative interest: the scheduled expiration of EGTRRA and JGTRRA and the mounting effects of the AMT. Those factors are worth examining in more detail.

Comparing the current-law path with one in which EGTRRA and JGTRRA are permanently extended highlights the sunset aspects of the two laws *(see Figure 5-3)*. The expiration of EGTRRA and JGTRRA contributes a bit more than 1 percentage point of the higher receipts-to-GDP ratio in 2015, declining to a bit less than 1 percentage point in 2050. The explanation for that ebbing effect lies in the AMT. As more and more taxpayers become subject to the AMT, the tax increases triggered by the sunset of EGTRRA and JGTRRA affect fewer and fewer taxpayers.

The AMT can be modified in various ways, each of which yields a different measure of its effect. For the purposes of illustration, CBO measured the impact of that tax relative to a policy change in which the higher AMT exemption for 2004 enacted in JGTRRA is made

permanent and all AMT parameters are indexed for inflation beginning in 2005 *(see Figure 5-4)*.[2] If the lower marginal tax rates in EGTRRA and JGTRRA were not extended, inflation would have only a small effect on the AMT in 2015. Over time, however, inflation has a three-pronged effect: it makes more taxpayers subject to the AMT, it causes a smaller proportion of their income to be exempt from the tax, and it pushes more taxpayers into the higher AMT tax brackets. Consequently, by 2050, the effect of inflation on the AMT under current law will make receipts as a share of GDP about 3 percentage points higher than they would be if the AMT was indexed.

Taken together, the expiration of EGTRRA and JGTRRA and the effect of inflation on the AMT will raise receipts as a share of GDP by about 2 percentage points in 2015, CBO estimates *(see Figure 5-5)*. In 2050, their combined effect will enlarge that share by about 4½ percentage points. The simultaneous effects of inflation on the AMT and the expiration of EGTRRA and JGTRRA exceed the sum of the effects of each factor individually because the two sets of effects interact. With lower tax rates in place, as provided for in EGTRRA and JGTRRA, the AMT will affect more taxpayers than it would if the old tax system were in place. Similarly, without an AMT, the tax reductions in EGTRRA and JGTRRA would have a greater impact.
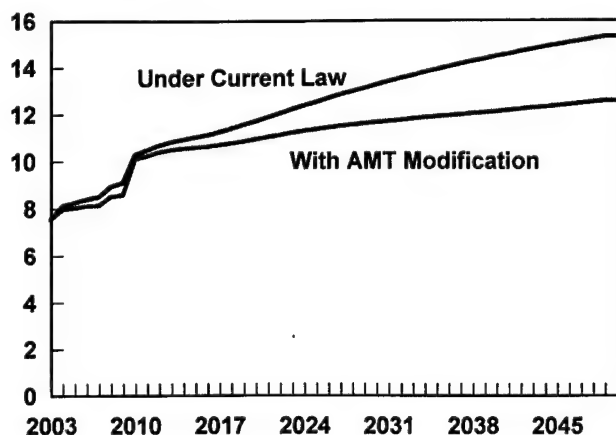
If those two tax laws are made permanent and the AMT is modified, the remaining increase in receipts as a share of GDP will be largely attributable to the progressive rate structure of the tax system. The growth of GDP and its effects on the rates at which income is taxed will increase that share by 2 percentage points by 2050 compared with the share that would result if individual income tax receipts remained steady relative to GDP. Most of that 2 percentage-point increase is commonly referred to as "real bracket creep" by analogy to the bracket creep that used to occur as a result of inflation before the tax system was indexed. But because even a low annual rate of inflation amounts to a significant increase in prices over 50 years, some of the effect shown

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2. That illustration also incorporates the assumption that the AMT does not limit personal credits.

Figure 5-4.

Individual Income Tax Liabilities Under Current Law or with the AMT Modified, 2003 to 2050

(Percentage of GDP)

Source: Congressional Budget Office.

Note: AMT = alternative minimum tax.

in Figure 5-5 is attributable to inflation's effects on the remaining unindexed provisions of the tax code. If, in addition to extending EGTRRA and JGTRRA and indexing the AMT, policymakers indexed the tax code to the growth of real income, much of the remaining difference between the current-law and historical-average paths would disappear.

Implications of the Current-Law Path

Continuation of current law would raise receipts relative to GDP. In the process, it would have important implications for taxpayers: more households would have to pay income taxes, more of those households would be subject to higher tax rates, and a smaller proportion of each household's income would fall in the lower and zero tax brackets than is currently the case.

The effect of the AMT on taxpayers would be especially significant. By 2050, roughly 20 percent of individual income tax liability would be generated by the AMT, compared with about 2 percent today *(see Figure 5-6)*. However, roughly 70 percent of the nation's households
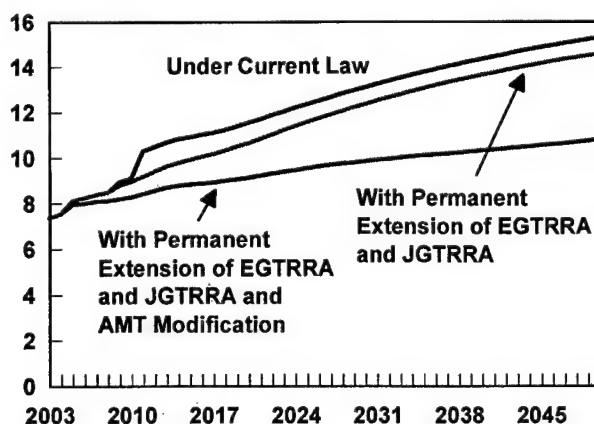
would be subject to the AMT in that year, a dramatic increase from the current 2 percent. Clearly, the AMT's contribution to receipts, although large, gives little indication of the number of people affected by the tax. The reason is that taxpayers would still have to pay the regular income tax, but an increasingly large number would also have to pay a smaller, additional AMT.

Real bracket creep in the current-law path would move more income into higher tax brackets. The share of total taxable income taxed at the regular rates of 15 percent and 28 percent is projected to fall from just over 75 percent in 2013 to 66 percent by 2050. As a result, by that year, 11 percent of income would be taxed at the higher rates of 31 percent, 33 percent, 36 percent, and 39.6 percent.

Figure 5-5.

Individual Income Tax Liabilities Under Three Policy Alternatives, 2003 to 2050
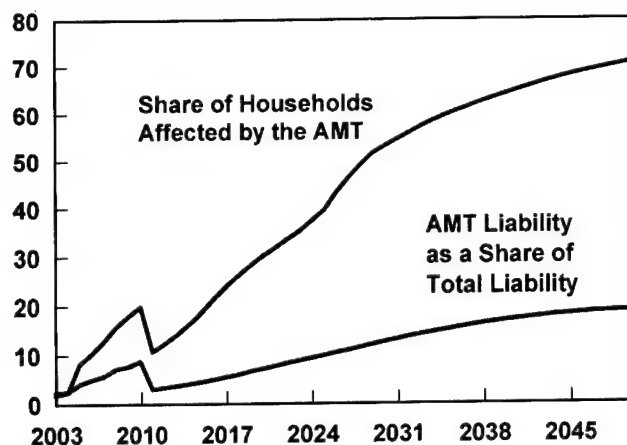
(Percentage of GDP)

Source: Congressional Budget Office.

Note: EGTRRA = Economic Growth and Tax Relief Reconciliation Act of 2001; JGTRRA = Jobs and Growth Tax Relief Reconciliation Act of 2003; AMT = alternative minimum tax.

Figure 5-6.

The AMT's Impact on Individual Income Tax Liabilities Under Current Law, 2003 to 2050

(Percent)

Source: Congressional Budget Office.

Note: AMT = alternative minimum tax.

Real income growth would also substantially reduce the role of many tax preferences. For example, over the next 50 years, the share of households with income low enough to claim the earned income tax credit would fall from about 14 percent of tax returns to 5 percent. The share of returns claiming the child tax credit would also plummet, from 18 percent to less than 1 percent. In addition, inflation and real wage growth would affect the threshold at which Social Security benefits became subject to taxation, because that threshold is not indexed. As a result, the proportion of total Social Security benefits that are taxed will rise from 19 percent today to 38 percent by 2050.

Other Taxes

As noted above, CBO projects that payroll tax receipts will decline slightly over the next half-century because of the reduction in the share of compensation paid as taxable wages and salaries. That decline, though noticeable, is small *(see Figure 5-7)*.

Other taxes will also tend to change under current law, but CBO does not explicitly address them in this analysis. Unless altered by legislation, excise taxes will tend to decline in importance. Estate and gift taxes, under the
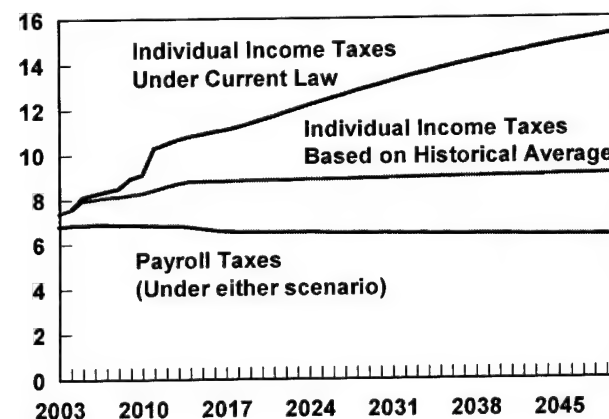
assumption that EGTRRA expires, will tend to rise as the real value of estates increases with higher levels of income and wealth. The 50-year course of corporate taxes is difficult to speculate about, even assuming no changes in tax law. Because the corporate tax rate structure is basically flat, there will be little effect from bracket creep. But at the same time, some long-term erosion has occurred in the amount of corporate income that is subject to taxation.

For the purposes of this analysis, CBO assumes that revenue sources other than the individual income tax and payroll taxes remain constant as a percentage of GDP. Since those other sources will collectively respond to the growth of income in either offsetting or unknown ways, that assumption is probably a reasonable approximation of the likely outcomes over the long run.

Figure 5-7.

Individual Income Taxes and Payroll Taxes Under the Current-Law and Historical-Average Scenarios, 2003 to 2050

(Percentage of GDP)

Source: Congressional Budget Office.

Note: The historical-average values are based on 30-year historical averages, beginning in 2012.

Details of the Long-Term
Budget Scenarios

This appendix provides more detail about the illustrative long-term budget scenarios used in this analysis. The assumptions about various types of spending and tax revenues that underlie those scenarios are outlined in *Table A-1*. The paths for spending, revenues, gross domestic product, and the total budget surplus or deficit under those scenarios are shown in *Figures A-1 to A-9*.

Table A-1.

Assumptions Underlying CBO's Long-Term Budget Scenarios

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
			Spending			
Medicare Outlays	Excess cost growth of 2.5 percent	Excess cost growth of 1.0 percent	No excess cost growth	Excess cost growth of 2.5 percent	Excess cost growth of 1.0 percent	No excess cost growth
Medicaid Outlays	Excess cost growth of 2.5 percent	Excess cost growth of 1.0 percent	No excess cost growth	Excess cost growth of 2.5 percent	Excess cost growth of 1.0 percent	No excess cost growth
Defense Outlays	Follow FYDP through 2022, then grow at rate of CPI	Phase down gradually to $380 billion (in 2003 dollars) in 2022 and then grow at rate of CPI	Phase down gradually to $380 billion (in 2003 dollars) in 2022 and then grow at rate of CPI	Follow FYDP through 2022, then grow at rate of CPI	Phase down gradually to $380 billion (in 2003 dollars) in 2022 and then grow at rate of CPI	Phase down gradually to $380 billion (in 2003 dollars) in 2022 and then grow at rate of CPI
Nondefense Discretionary Outlays	Phase down to historical share of GDP (3.6 percent) by 2008 and remain there	Phase down to historical share of GDP (3.6 percent) by 2008 and remain there	Grow at rate of CPI after 2007	Phase down to historical share of GDP (3.6 percent) by 2008 and remain there	Phase down to historical share of GDP (3.6 percent) by 2008 and remain there	Grow at rate of CPI after 2007
Other Mandatory Outlays	Stabilize at the 2006 level as a percentage of GDP	Stabilize at the 2006 level as a percentage of GDP	Decline by 1 percent annually as a percentage of GDP	Stabilize at the 2006 level as a percentage of GDP	Stabilize at the 2006 level as a percentage of GDP	Decline by 1 percent annually as a percentage of GDP
Social Security Outlays	Benefits paid as scheduled under current law	Benefits paid as scheduled under current law	Benefits paid as scheduled under current law	Benefits paid as scheduled under current law	Benefits paid as scheduled under current law	Benefits paid as scheduled under current law

(Continued)

Table A-1.

Continued

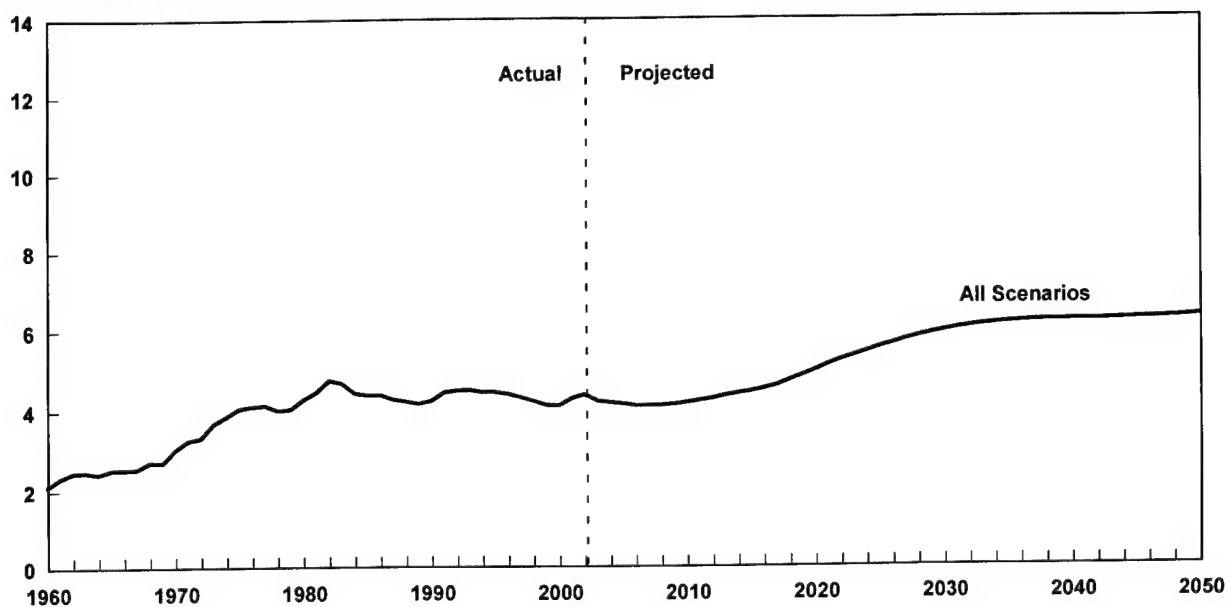|	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
			Revenues			
Individual Income Taxes	Gradually rise as a percentage of GDP until 2012, then adjusted so total federal revenues equal 18.4 percent of GDP	Gradually rise as a percentage of GDP until 2012, then adjusted so total federal revenues equal 18.4 percent of GDP	Gradually rise as a percentage of GDP until 2012, then adjusted so total federal revenues equal 18.4 percent of GDP	Follow current law	Follow current law	Follow current law
Corporate Income Taxes	Remain fixed at 2013 level as a percentage of GDP	Remain fixed at 2013 level as a percentage of GDP	Remain fixed at 2013 level as a percentage of GDP	Remain fixed at 2013 level as a percentage of GDP	Remain fixed at 2013 level as a percentage of GDP	Remain fixed at 2013 level as a percentage of GDP
Social Insurance (Payroll) Taxes	Follow current law	Follow current law	Follow current law	Follow current law	Follow current law	Follow current law
Excise Taxes	Remain fixed at 2013 level as a percentage of GDP	Remain fixed at 2013 level as a percentage of GDP	Remain fixed at 2013 level as a percentage of GDP	Remain fixed at 2013 level as a percentage of GDP	Remain fixed at 2013 level as a percentage of GDP	Remain fixed at 2013 level as a percentage of GDP

Source: Congressional Budget Office.

Note: FYDP = Future Years Defense Program; CPI = consumer price index; GDP = gross domestic product.

Figure A-1.

Social Security Spending Under CBO's Long-Term Budget Scenarios
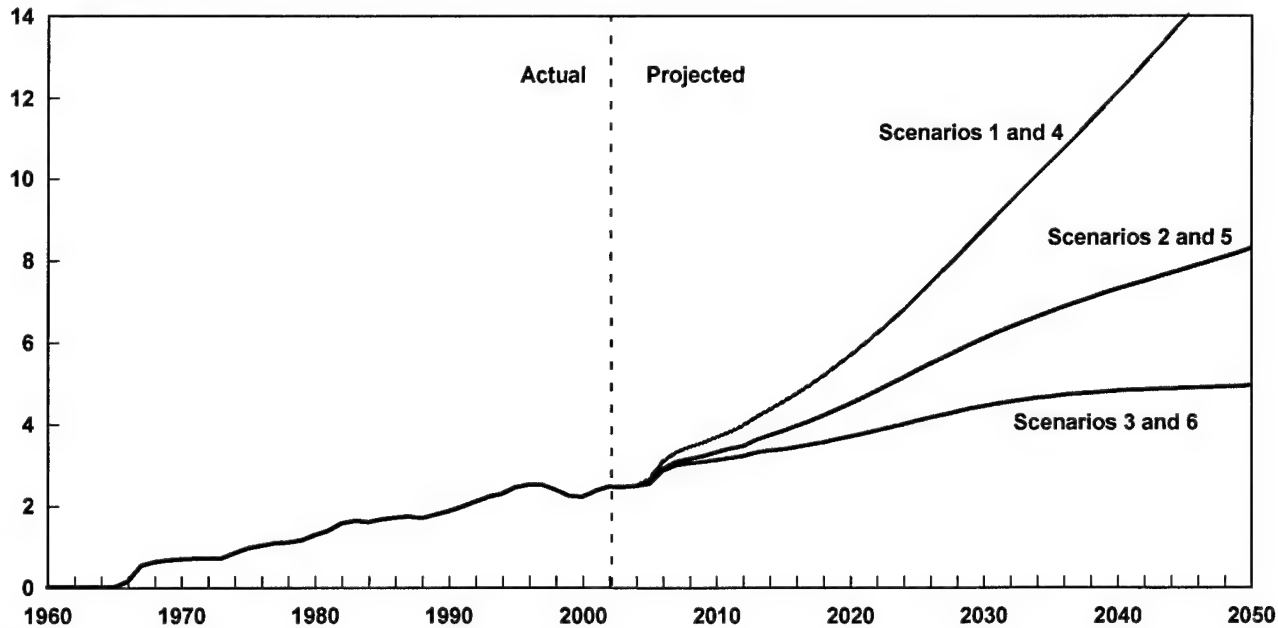
(Percentage of GDP)

Source: Congressional Budget Office.

Note: For information about the scenarios, see Table A-1 and Chapter 1.

Figure A-2.

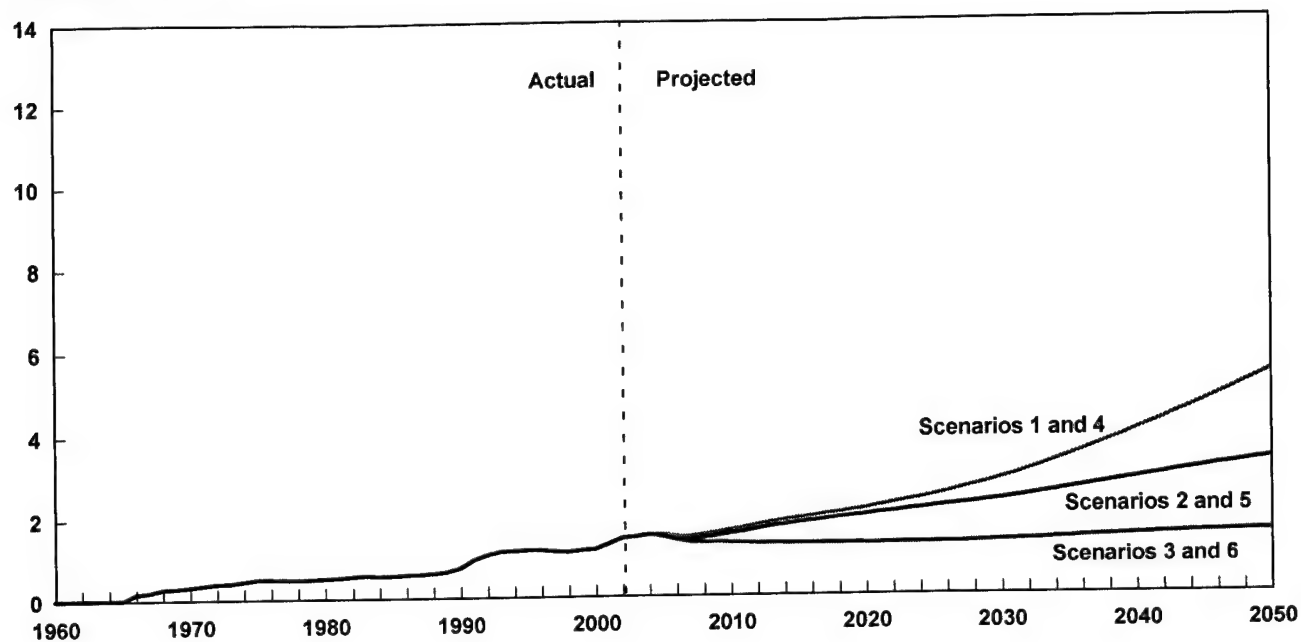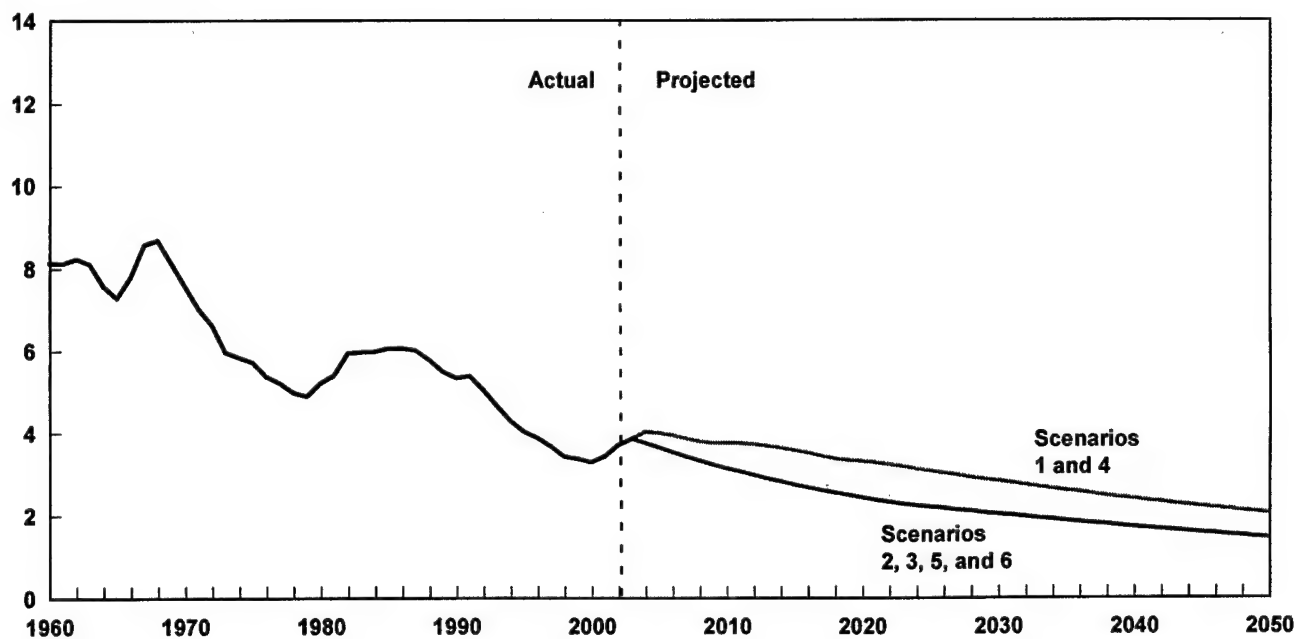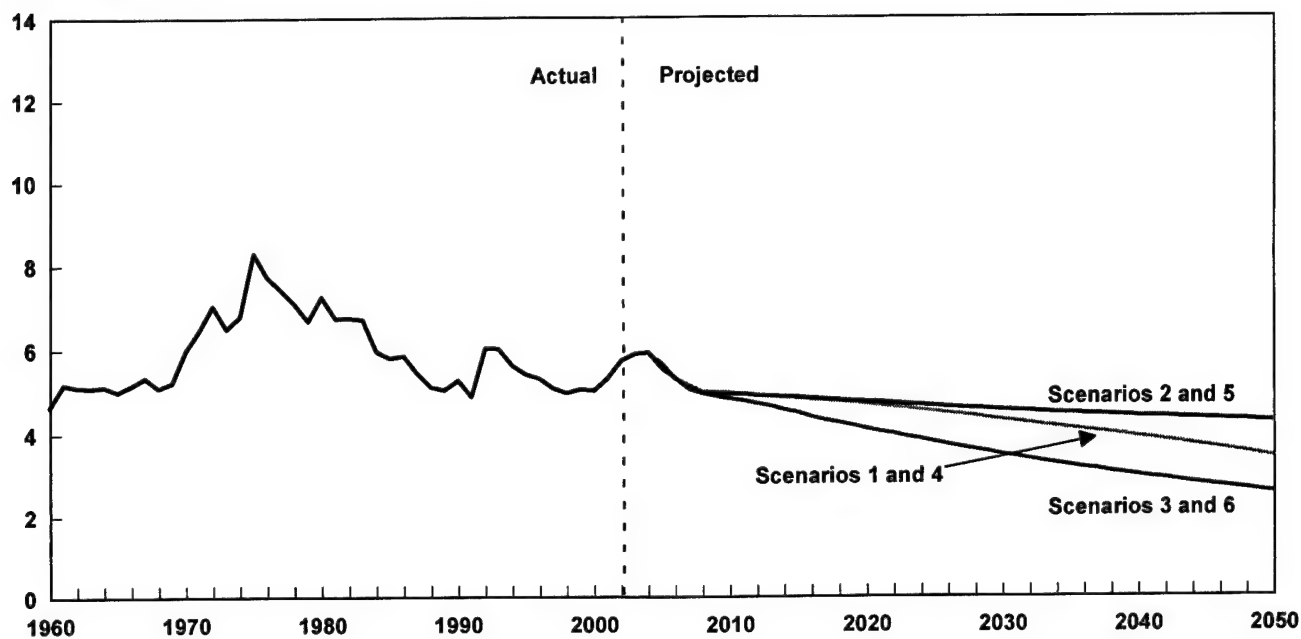# Medicare Spending Under CBO's Long-Term Budget Scenarios

(Percentage of GDP)

Source: Congressional Budget Office.

Note: For information about the scenarios, see Table A-1 and Chapter 1.

Figure A-3.

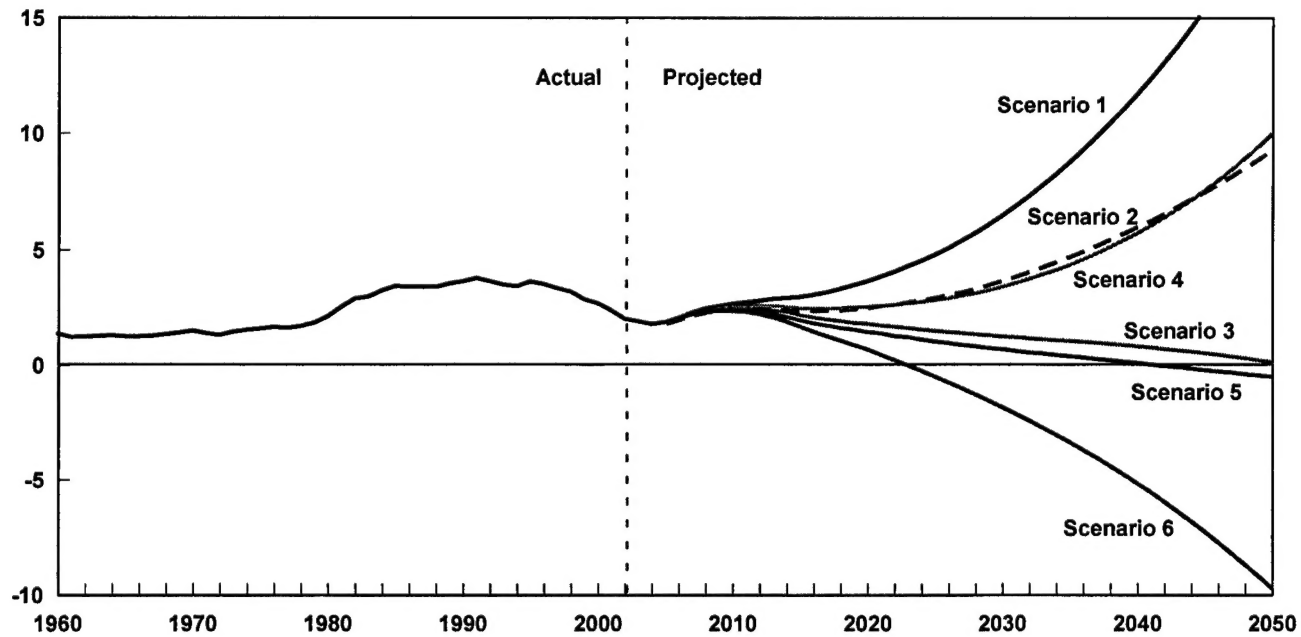# Federal Medicaid Spending Under CBO's Long-Term Budget Scenarios

(Percentage of GDP)

Source: Congressional Budget Office.

Note: For information about the scenarios, see Table A-1 and Chapter 1.

Figure A-4.

Defense Spending Under CBO's Long-Term Budget Scenarios

(Percentage of GDP)

Source: Congressional Budget Office.

Note: For information about the scenarios, see Table A-1 and Chapter 1.

Figure A-5.

Other Federal Spending Under CBO's Long-Term Budget Scenarios

(Percentage of GDP)

Source: Congressional Budget Office.

Note: Other federal spending includes nondefense discretionary spending; mandatory spending for programs other than Social Security, Medicare, and Medicaid; and offsetting receipts. It excludes net interest on the public debt. For information about the scenarios, see Table A-1 and Chapter 1.

Figure A-6.

Federal Interest Spending Under CBO's Long-Term Budget Scenarios
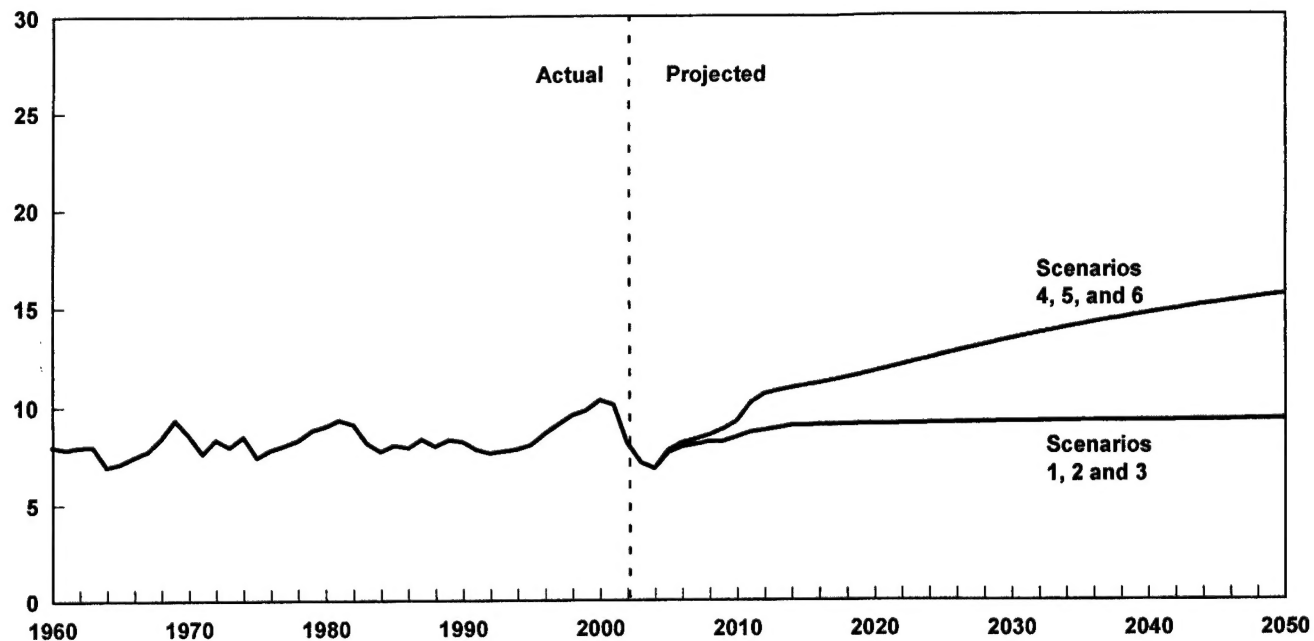
(Percentage of GDP)

Source: Congressional Budget Office.

Note: For information about the scenarios, see Table A-1 and Chapter 1.

Figure A-7.

Personal Tax Revenues Under CBO's Long-Term Budget Scenarios
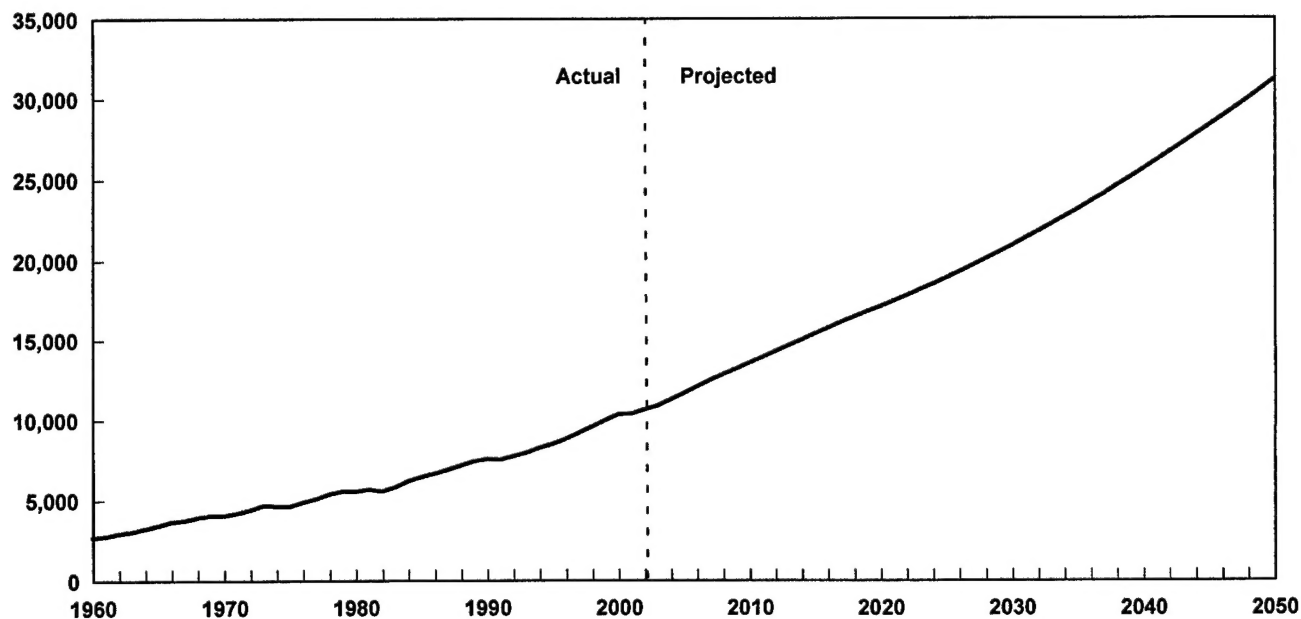
(Percentage of GDP)

Source: Congressional Budget Office.

Note: For information about the scenarios, see Table A-1 and Chapter 1.

Figure A-8.

Real Gross Domestic Product Under CBO's Long-Term Budget Scenarios
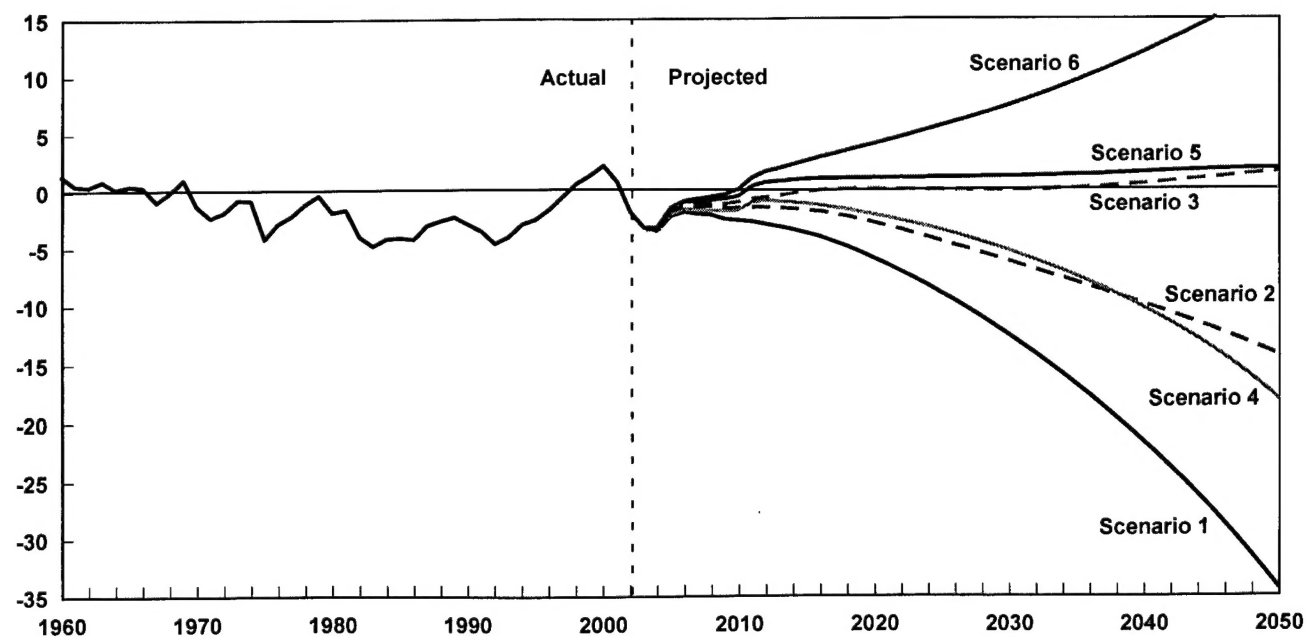
(Billions of 2003 dollars)

Source: Congressional Budget Office.

Note: For information about the scenarios, see Table A-1 and Chapter 1.

Figure A-9.

Total Surplus or Deficit Under CBO's Long-Term Budget Scenarios

(Percentage of GDP)

Source: Congressional Budget Office.

Note: For information about the scenarios, see Table A-1 and Chapter 1.